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Government of Nepal

Medical Education Commission

Sanothimi, Bhaktapur

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Editorial

Evolving Issues in Curriculum Frameworks of Health Professions' Education

✍ **Prof. Ramesh Prasad Aacharya***
Director, Planning, Co ordination & Academic Upgrading
Medical Education Commission

Curriculum frameworks provide benchmarks to guide institutions in developing and implementing academic programs that will ultimately ensure production of quality human resources. These frameworks in case of health professions education contribute for better health services to the people.

National Medical Education Act promulgated in 2019 emphasizes that the curriculum should not only incorporate the theoretical aspects of the subject but also practical skills, humanitarian sensitivity, communication skills, professionalism, social responsibilities, cooperation, ethics and leadership skills. Till date Nepal lacks national curriculum frameworks for health professions education. Various academic institutions have their individualized curriculum and thus need standardization and harmonization. Curricular variations deserve discussion among the stakeholders to develop a national framework without jeopardizing the academic autonomy of the universities and academies.

Community based education - Contextual learning is important for the students in the field of of health professions' education. Primary health care context needs to be internalized by the undergraduate medical students.[1, 2] This has become more relevant in the recent past as many of them are going for mandatory service in primary health care facilities for two years. Medical colleges are required to adopt designated district and ensure the provision of community health and clinical services.[3] Adequate attention to cultural diversity is another important component of community based education. Integrating biomedical and socio-cultural aspects beyond culture and gender including the current trends of homogenous social groups is needed. Diversity-responsive medical education contributes for the development of diversity-responsive health care.[4]

Curriculum integration and problem based learning – Chapter-wise integration of basic medical science courses into the medical curriculum appears to be a feasible strategy for better understanding of basic science concepts and to increase motivation and engagement of medical students.[5]

Competency-based curriculum – There has been a global trend of transformation from a traditional content-based curriculum to a competency-based curriculum. The broader social-accountability movement has accelerated this rate of transformation.[6] Hence, competency-based curriculum has become an essential component of curriculum framework. While achieving the competency on relevant skills, the students learn to reflect on their concepts and experiences which in itself will be a routine in their professional life as a health care worker.[7]

Supportive curriculum – Fundamental areas of health profession education often labeled as supportive curriculum are parts of the curriculum framework and include medical humanities, ethics, patient safety, communication skills, teamwork and leadership etc.

Core contents – National consensus has to be built on the core contents which will remain as the common components and thus the part of curriculum framework. Online courses and virtual

teaching have been practiced widely during the COVID-19 pandemic. There is a need to identify the components which can be implemented online. Flexible, modular curricular components can be implemented with the involvement of multi-disciplinary team. Creation of teaching materials together and sharing them among the institutions will contribute for the effective implementation of curriculum framework.[8]

Way forward

A consensus building workshop was organized by Medical Education Commission regarding the need of national curriculum frameworks on all academic programs of health professions' education. This first workshop on the issue was focused on the bachelor level programs with particular focus on MBBS. A team of experts is currently working to develop curriculum framework for MBBS program. Similar activities on other academic programs are on pipeline and these activities are expected to contribute for the development of national academic standards by fostering curriculum innovations, ensuring technology-friendly teaching learning and facilitating equivalence.

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Postgraduate Dental Education in Nepal

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Abstract

Nepal has made a significant progress in medical education in the last three decades as evident by the establishment of many medical institutions from both public and private sectors. Dental education has important place in academic as well as in health care services. The formal dental education programs constitute Bachelor of Dental Surgery (BDS) and postgraduate Master of Dental Surgery (MDS) courses. Presently, fourteen institutions are offering BDS and seven institutions are offering MDS program in Nepal.

This article reviews the historical events and present scenario of the postgraduate dental education in Nepal. It presents the facts and figures related to dental postgraduates produced in the country by various universities and institutions in chronological order. The data were collected from institutional documents, published literature and from the research on human resource in health in Nepalese dentistry.

Keywords: *dentistry, medical education, postgraduate, specialist, university Nepal*

Human resource in dental specialty

The health taskforce works for the improvement of health services and contributes to build a healthy and prosperous nation. The human resource situation in dentistry is gradually improving in Nepal. The number of dental specialists has increased rapidly in the country in last two decades (Figure 1). The MDS graduates are produced by constituent and affiliated colleges of Tribhuvan University (TU), Kathmandu University (KU), and health science academies National Academy of Medical Sciences (NAMS) and BP Koirala Institute of Health Sciences (BPKIHS). Presently, seven institutions are offering MDS program in the country.

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The increase in postgraduate dental health human resource has largely fulfilled the faculty requirement of the dental colleges. A study estimated 60% of the postgraduate dental specialists work as faculty in dental/medical institutions.[1] According to the Nepal Medical Council registration, there are 616 MDS graduates including 338 male and 278 female till December 2020.[2] In the present scenario, there is an increasing trend of studying the postgraduate course in the country. The order of dental postgraduates according to graduating country were Nepal 45%, China 21%, India 9%, Philippines 6%, Bangladesh 5%, others 14% in 2015.[1] So far, Nepali universities and postgraduate institutes have produced 344 MDS graduates with an average annual production of 23 per year (Table 1).

Table 1: Annual production of MDS graduates in Nepal

Year	Tribhuvan University	Kathmandu University	BP Koirala Institute of Health Sciences	National Academy of Medical Sciences	Total
2006	-	8	-	-	8
2007	-	5	-	-	5
2008	-	8	-	-	8
2009	-	11	-	-	11
2010	-	21	-	-	21
2011	-	39	-	2	41
2012	-	-	-	2	2
2013	9	-	-	3	12
2014	17	-	10	2	29
2015	19	-	12	5	36
2016	18	-	10	2	30
2017	14	3	13	3	33
2018	21	6	10	1	38
2019	16	4	11	2	33
2020	17	3	11	6	37
Total	131	108	77	28	344

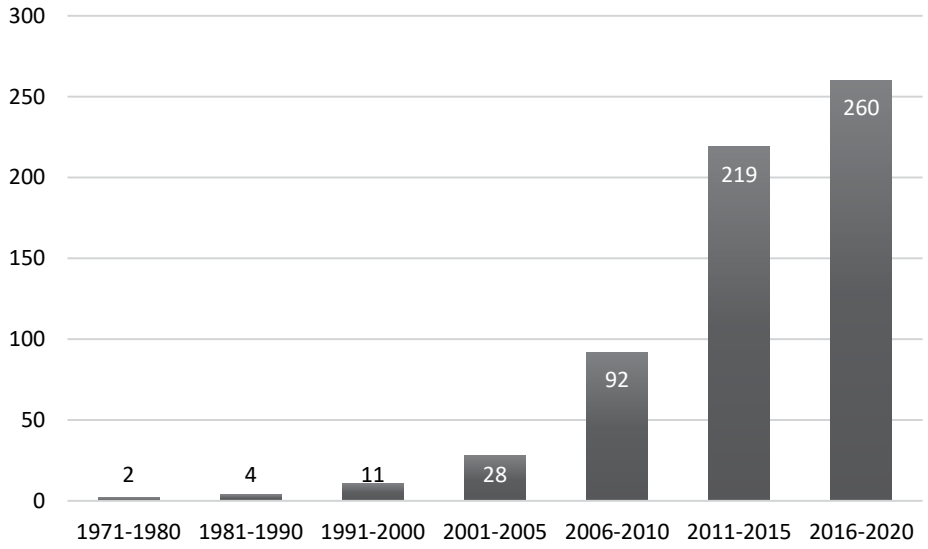

Figure 1: Distribution of Nepali dental specialists according to period of graduation

Foundation of postgraduate dental education in Nepal

During the early 2000's, there were very less number of dental specialists who were graduated from foreign countries like India, China, Bangladesh, Pakistan, Philippines, Russia, etc. The newly established dental colleges in Nepal were lacking dental faculties, which had to be fulfilled from the neighboring countries . There was a huge demand for dental postgraduates in dental colleges and to deliver the skill in the job market of dentistry.

Historically, Tribhuvan University Institute of Medicine commenced MBBS course in 1978 and postgraduate MD (General Practice) course in 1982.[3, 4] The BDS program was started in the year 1999 at People's Dental College, Kathmandu (affiliated to TU) and at BP Koirala Institute of Health Sciences, Dharan.[5] The postgraduate dental

education was initiated by Kathmandu University in 2003.[6, 7]

On July 15th 2002, Kathmandu University signed an agreement with Manipal Education and Medical Group to conduct postgraduate programs in medical sciences and dentistry in collaboration with Manipal Academy of Higher Education.[7] Nepal Medical Council published the regulations for postgraduate education in 2003/04 which paved the way for institutions to run PG programs.[8, 9] Accordingly, KU commenced 3-year Master of Dental Surgery program in Prosthodontics, Conservative Dentistry and Oral Surgery affiliated with Manipal College of Dental Surgery, Mangalore, India in June 2003. In subsequent years, the university further expanded the MDS programs in Community Dentistry, Oral Medicine & Radiology, Periodontics, Oral Pathology, and Pedodontics subjects at Mangalore and Manipal Campuses. However, the program was abandoned in 2008 after the objection from Dental Council of India. KU produced 92 dental specialists including 68 Nepalese graduates until the last batch graduated in November 2011. Kathmandu University introduced MDS program at its affiliated Kantipur Dental College in June 2014 (Table 2). So far, KU has produced 16 MDS graduates through Kantipur Dental College (Table 2). Later in September 2018, KU started MDS program at its constituent School of Medical Sciences - Dhulikhel Hospital.

National Academy of Medical Sciences (NAMS), an autonomous postgraduate institute started in 2002. began MDS program in Orthodontics at Bir Hospital, Kathmandu from August 17, 2008. It was the first postgraduate program in dentistry within the country. NAMS has produced 28 dental postgraduates till the end of 2020 (Table 3).

In 2010, Tribhuvan University Institute of Medicine commenced postgraduate dental program at Maharajgunj Medical Campus and at affiliated People's Dental College. Subsequently, Universal College of Medical Sciences, Bhairahawa began MDS program in 2011. TU has produced 131 MDS graduates till date (Table 4). BP Koirala Institute of Health Sciences instituted MDS program in 2011. So far BPKIHS has produced 77 dental postgraduates (Table 5).

Table 2: MDS graduates of Kathmandu University

Institute	Year	Comm Dent	Cons Endo	Oral Med	Oral Path	Oral Surg	Ortho	Pedo	Perio	Prostho	Total
College of Dental Surgery, Mangalore/ Manipal, India	2006	0	2	0	0	4	-	0	0	2	8
	2007	0	2	0	0	3	-	0	0	0	5
	2008	1	3	1	0	0	-	0	1	2	8
	2009	0	4	0	0	2	-	2	1	2	11
	2010	2	6	3	0	5	-	5	0	0	21
	2011	2	4	3	6	4	-	7	7	6	39
	Total	5	21	7	6	18	0	14	9	12	92
Kantipur Dental College, Kathmandu, Nepal	2017	0	-	-	2	-	1	-	-	0	3
	2018	2	-	-	2	-	1	-	-	1	6
	2019	1	-	-	0	-	3	-	-	0	4
	2020	0	-	-	0	-	2	-	-	1	3
	Total	3	-	-	4	-	7	-	-	2	16
Grand Total		8	21	7	10	18	7	14	9	14	108

(Comm Dent: Community & public health dentistry, Cons Endo: Conservative dentistry & endodontics, Oral Med: Oral Medicine, Oral Path: Oral Pathology, Oral Surg: Oral Surgery, Orthod: Orthodontics, Pedod: Pedodontics, Perio: Periodontics, Prostho: Prosthodontics)

Table 3: MDS graduates of National Academy of Medical Sciences

Year	Ortho	Perio	Prostho	Cons Endo	Oral Surg	Total
2011	2	-	-	-	-	2
2012	-	1	1	-	-	2
2013	-	2	1	-	-	3
2014	-	1	1	-	-	2
2015	-	3	2	-	-	5
2016	-	1	1	-	-	2
2017	-	2	1	-	-	3
2018	-	1	-	-	-	1
2019	-	2	-	-	-	2
2020	-	2	2	1	1	6
Total	2	15	9	1	1	28

Table 4: MDS graduates of Tribhuvan University

Institute		Cons Endo	Oral Surg	Ortho	Perio	Prostho	Total
Maharajgunj Medical Campus, Kathmandu.	2013	-	-	2	-	-	2
	2014	-	-	2	-	-	2
	2015	-	-	2	-	-	2
	2016	-	-	2	-	-	2
	2017	-	-	2	-	-	2
	2018	-	-	2	-	-	2
	2019	-	-	1	-	-	1
	2020	-	-	2	-	-	2
	Total	-	-	15	-	-	15
People's Dental College, Kathmandu.	2013	2	-	1	2	2	7
	2014	2	-	2	2	3	9
	2015	2	-	2	2	4	10
	2016	2	-	2	-	1	5
	2017	1	-	1	-	3	5
	2018	1	-	4	2	4	11
	2019	1	-	4	2	4	11
	2020	1	-	3	2	3	9
	Total	12	-	19	12	24	67
Universal College of Medical Sciences, Bhairahawa.	2014	1	2	2	-	1	6
	2015	1	1	0	4	1	7
	2016	2	2	3	2	2	11
	2017	2	2	2	1	-	7
	2018	2	2	2	1	1	8
	2019	1	1	1	1	-	4
	2020	1	2	0	0	3	6
	Total	10	12	10	9	8	49
Grand Total		22	12	44	21	32	131

Table 5: MDS graduates of BP Koirala Institute of Health Sciences

Year	Comm Dent	Cons Endo	Oral Med	Oral Path	Oral Surg	Ortho	Pedo	Perio	Prostho	Total
2014	-	2	-	-	2	-	2	2	2	10
2015	-	2	-	-	2	2	2	2	2	12
2016	-	2	-	-	2	-	2	2	2	10
2017	2	2	2	-	-	-	2	2	3	13
2018	1	2	1	-	-	-	2	2	2	10
2019	1	2	1	-	1	-	2	2	2	11
2020	1	2	1	1	-	1	2	1	2	11
Total	5	14	5	1	7	3	14	13	15	77

Postgraduate programs in basic science for dental graduates

Basic medical science subjects are essential for the teaching/learning of medicine and dentistry. However, there has always been an acute shortage of basic medical science faculties in growing medical colleges of Nepal. In western countries and in few Asian countries like Sri Lanka; dental graduates can track basic science subjects as their career path. Thus in 2003, BP Koirala Institute of Health Sciences allowed BDS graduates to pursue postgraduate MD/MS programs in basic medical science subjects through a 3-month bridge course on the approval of Nepal Medical Council. However, BPKIHS halted this program in 2011. A total of 46 basic science graduates from dentistry background were produced in Anatomy, Biochemistry, Microbiology, Pharmacology, Physiology and Forensic Medicine subjects until the last batch graduated in 2014/15. Similarly, Kathmandu University in 2011 permitted MD/MS programs for BDS graduates in Anatomy, Biochemistry, Microbiology, Pharmacology and Physiology subjects. So far KU has produced more than one hundred basic science graduates from dental background through its constituent campus and affiliated medical colleges.

Role of regulatory bodies

Various universities recommend their own curricula for the academic programs. The entry criteria, academic programs and evaluation systems vary among different universities. Nonetheless, the ethos of the postgraduate syllabus is competency-based learning in both general and specialized areas of interest and to prepare the graduates in teaching, research and specialty clinical practices. These issues are required to be regulated by the government and the regulatory bodies.

Nepal Medical Council published 'Regulations for postgraduate education - 2003'[8] and 'Postgraduate dental education course regulation - 2004'[9] to standardize PG programs. Nepal Medical Council made a mandatory rule to obtain eligibility certificate for Nepali students who desire to pursue higher education in foreign universities in 2008. Furthermore, in 2017 the council added another rule requiring the students to qualify any medical entrance exam in the country prior to studying abroad. These rules attempt to regulate Nepalese students going abroad for studies. The council revised the 'Regulations for postgraduate dental education (MDS Programs) - 2017'[10] which was approved by Ministry of Health on December 27, 2017.

In a further development to organize the medical education sector; 'Medical Education Commission' was constituted and 'Medical Education Act-2075' was promulgated, which was passed by the parliament on February 22, 2019. The newly formed commission for the first time allotted the postgraduate seats to the dental colleges for the academic year 2020/21 (Table 6) and the Common Entrance Examination is underway for

the enrollment of postgraduate students. New regulations are expected to enforce the further advancement of postgraduate education in the country.

Table 6: Postgraduate MDS seats allotted for the Year 2020/21 by Medical Education Commission

Institution		PG start year	Comm Dent	Cons Endo	Oral Med	Oral Path	Oral Surg	Ortho	Pedo	Perio	Prostho	Total
NAMS		2008	-	1	-	-	1	1	-	2	2	7
BPKIHS		2011	2	2	1	1	1	1	3	3	4	18
TU	MMC	2010	-	-	-	-	1	1	-	-	-	2
	PDC	2010	-	3	-	-	1	4	1	3	4	16
	UCMS	2011	-	1	-	-	1	3	-	-	-	5
	KIST	2020/21	-	-	-	-	-	-	-	-	1	1
	CMC	2020/21	-	-	-	-	-	2	-	-	-	2
KU	KDC	2014	-	1	-	2	-	3	1	1	2	10
	KUSMS	2018	-	-	-	-	1	1	1	1	1	5
	NMC	2020/21	-	1	-	-	-	2	-	-	-	3
	KMC	2020/21	-	1	-	-	1	-	-	-	1	3
Total			2	10	1	3	7	18	6	10	15	72

(NAMS: National Academy of Medical Sciences-Kathmandu, BPKIHS: BP Koirala Institute of Health Sciences-Dharan, MMC: Maharajgunj Medical Campus-Kathmandu, PDC: People's Dental College-Kathmandu, UCMS: Universal College of Medical Sciences- Bhairahawa, KIST: KIST Medical College- Lalitpur, CMC: Chitwan Medical College-Chitwan, KDC: Kantipur Dental College-Kathmandu, KUSMS: Kathmandu University School of Medical Sciences-Dhulikhel, NMC: Nepal Medical College-Kathmandu, KMC: Kathmandu Medical College-Bhaktapur)

Conclusion

The number of postgraduate dental institutes and graduates in specialized subjects are increasing in Nepal. It is a continuing challenge to produce qualitative growth in human resource rather than the quantitative increase. The concerned authorities and all stakeholders must realize that the postgraduate education should produce the specialist doctor for the society who is the final hope of the commoner with disease and sufferings.

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Original Article

Role of Neutrophil to Lymphocyte Ratio (NLR) and Platelet to Lymphocyte Ratio (PLR) in Preoperative Prediction of Mortality in Patients with Secondary Peritonitis

Kishor Kumar Deo
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Abstract

Introduction

Secondary Peritonitis is a common surgical emergency with high morbidity and mortality rates. Preoperative identification of patients with greater risk of mortality may help in more intensive approach in these patients besides aiding in realistic patient counseling. Neutrophils, lymphocytes and platelets are important factors in inflammatory response and immune-modulation. Thus, this study was carried out to evaluate the role of neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) in predicting mortality among patients undergoing exploratory laparotomy for secondary peritonitis.

Methods

This is a retrospective hospital based study consisting of 138 patients undergoing exploratory laparotomy for secondary peritonitis in Department of General Surgery of Bir Hospital, National Academy of Medical Sciences between January 2018 and June 2020. Patients were divided into 2 groups – 'With mortality' and 'Without mortality'. Univariate and multivariate analysis were performed to identify factors associated with mortality. ROC curve analysis was performed to evaluate the role of NLR and PLR in predicting mortality in patients undergoing exploratory laparotomy for secondary peritonitis.

Result

Out of 138 patients, 91 (65.9%) were male and mean age of the patients was 43.5 ± 18.1 years. Duodenal perforation was the most common diagnosis, in 53 (38.4%) patients. In-hospital mortality was 8.7%. Older age, delayed presentation to hospital, high neutrophil counts and low lymphocyte counts were associated with higher mortality. 'Neutrophil to lymphocyte ratio' (NLR) and 'Platelet to lymphocyte ratio' (PLR) were significantly higher in mortality cases. On multivariate analysis, high NLR was shown to be an independent predictor of mortality in peritonitis patients (OR = 6.898, 95% CI = 1475 – 32.264, p value = 0.014). On ROC curve analysis, NLR had higher discriminatory power than PLR (Area under the curve, AUC = 0.928 vs. 0.753). The cutoff value of NLR for predicting mortality was ≥ 7.91, while cutoff value of PLR was ≥ 273.81.

Conclusion

High NLR and high PLR were significantly associated with mortality among peritonitis patients. NLR had better ability than PLR to predict patient mortality after exploratory laparotomy for peritonitis. The cutoff values for NLR and PLR were ≥ 7.91 and ≥ 273.81 respectively. At suggested cutoffs, NLR had higher sensitivity than PLR (83.33% vs. 50%) but specificity of NLR was lower than PLR (88.89% vs. 94.44%). Further studies are needed to confirm the utility of NLR and PLR in these patients.

Keywords: Exploratory laparotomy, Mortality, Peritonitis, Neutrophil to lymphocyte ratio (NLR), Platelet to lymphocyte ratio (PLR).

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INTRODUCTION

Secondary peritonitis is an acute infection of the peritoneum that results from loss of integrity of gastrointestinal tract or other abdominal viscera. This includes acute perforation peritonitis (e.g. due to gastrointestinal perforation or intestinal ischaemia), postoperative peritonitis (e.g. anastomotic leak) as well as post-traumatic peritonitis (due to blunt or penetrating injury).[1] Secondary peritonitis comprises approximately 1% of all emergency hospital admissions. It is associated with very high morbidity and mortality and is the second most common source of sepsis in patients in intensive care units.[2] In a large study of 11200 patients, 11% of patients with peritonitis had severe sepsis, 74% had single organ failure and 20% had multi-organ failure.[3] Studies from various parts of Nepal have reported overall mortality rates from 8 to 12%.[4–6] However, mortality rates of up to 34% have been noted in peritonitis with severe sepsis.[3]

Factors like older age of the patient, presence of co-morbidities, non-appendicular aetiology and delay in intervention have been shown to increase the mortality in secondary peritonitis.[7, 8] A number of scoring systems have also been evaluated as prognostic markers in secondary peritonitis. These include Mannheim Peritonitis index (MPI)[7–9], Acute Physiology and Chronic Health Evaluation II score (APACHE II)[7, 9] and Simplified Acute Physiology Score (SAP).[9] However most of these scores are cumbersome with multiple parameters, often requiring both preoperative as well as intraoperative data. As such these are difficult to apply and have limited role in preoperative prognostication.

Neutrophils and lymphocytes have long been recognized as important regulators of inflammatory and immune response with severe depletion of lymphocytes occurring in most cases of sepsis.[10] Although platelets have traditionally been associated with regulation of microvascular thrombosis, its role in inflammation is increasingly being understood recently.[11]

Shimoyama et al evaluated various inflammatory markers in patients with gastrointestinal perforation peritonitis and concluded that 'Neutrophil to Lymphocyte Ratio' (NLR) and 'Platelet to Lymphocyte Ratio' (PLR) were superior to other inflammation-based scores in predicting mortality.[12] Increased NLR has also been shown to be associated with worse outcomes in patients with sepsis.[13] High NLR has been investigated as a predictor of complicated appendicitis[14, 15] and severe Covid-19.[16] Meanwhile, NLR was not found to be a predictor of mortality in mesenteric ischaemia patients in one study.[17] High PLR has been demonstrated as a marker of increased mortality in sepsis.[18] However, another study found that PLR has no effect on mortality in critically ill patients.[19] There is no consensus as yet on value of NLR and PLR in evaluation and prognostication of patients with secondary peritonitis.

NLR and PLR are easily obtained from routinely performed preoperative blood investigations and involve minimal cost. Thus, prognosis may be judged preoperatively and arrangements can be made for more aggressive management strategy in patients with worse predictions in order to improve their outcomes. Although there are few studies on role of NLR in appendicitis in Nepal[20], we could not find any studies on NLR or PLR in secondary peritonitis in our region. Hence, this study was carried out to evaluate the role of NLR and PLR in preoperative prediction of mortality in patients undergoing exploratory laparotomy for secondary peritonitis.

METHODS

Medical records of patients undergoing exploratory laparotomy for peritonitis in the department of General Surgery of Bir Hospital, National Academy of Medical Sciences between 2018 January and 2020 June were retrieved and retrospectively reviewed. Patients above 16 years of age who were operated for generalized secondary peritonitis due to any cause were included in the study. Altogether 177 cases were identified. Patients

with immunosuppressive conditions/medications or malignancy or incomplete data were excluded. Finally, 138 patients were eligible for the study. Preoperative data like age, gender, duration of symptoms and abdominal findings were recorded. Laboratory parameters including total and differential leucocyte counts and platelet counts in the peripheral circulation at the time of admission were also noted. Neutrophil to lymphocyte ratio was derived by dividing differential neutrophil counts by differential lymphocyte counts. Similarly platelet to lymphocyte ratio was calculated by dividing absolute platelet counts by absolute lymphocyte counts. Intraoperative diagnosis and operative procedure were recorded. The primary outcome measured was occurrence of in-hospital mortality.

SPSS version 16 was used for data analysis. Patients were divided into two groups – 'Group without mortality' & 'Group with mortality'. Preoperative and intraoperative factors were compared between the two groups to evaluate factors associated with mortality. Continuous data are presented as mean ± SD. Categorical data are presented as number (percentages). Independent samples t test was used for comparative analysis of continuous data and Fisher's exact test was used for categorical data. Multivariate logistic regression analysis was also performed to identify preoperative and intraoperative factors associated with mortality. A p value of < 0.05 was taken as significant. Furthermore, ROC curve analysis was carried out to evaluate the role of neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) in predicting in-hospital mortality among patients undergoing exploratory laparotomy for peritonitis. Best cut-off values with high sensitivity, specificity and accuracy were derived for NLR and PLR.

RESULT

A total of 138 patients were included in the study. Mean age of the patients was 43.5 ± 18.1 years (range 17 to 85 years). There were 91 (65.9%) males. Duodenal perforation was the most common diagnosis, observed in 53 (38.4%) patients. Appendicular perforation was the next common diagnosis (21%). In-hospital mortality was observed in 12 (8.7%) patients.

Table 1: Indications for exploratory laparotomy in patients with peritonitis

Diagnosis	Frequency (%) N =138
Duodenal Ulcer Perforation	53 (38.4%)
Appendicular Perforation	29 (21.0%)
Ileal Perforation	20 (14.5%)
Strangulating Intestinal Obstruction	12 (8.7%)
Jejunal Perforation	8 (5.8%)
Colonic Perforation	5 (3.6%)
Mesenteric Ischaemia	5 (3.6%)
Others	6 (4.3%)
Total	138 (100%)

Results of univariate analysis of characteristics of patients undergoing exploratory laparotomy for peritonitis are shown in tables 2 and 3. Mean age was significantly higher in patients with mortality as compared to those without mortality (58.25 ± 17.4 vs. 42.02 ± 17.6 years, $p = 0.003$). Similarly mortality was higher among those who presented more than 48 hours after disease onset ($p = 0.006$).

Mortality rate was highest among patients with mesenteric ischemia {2 out of 5, (40%)} followed by colonic perforation (20%). Appendicular perforation was associated with the lowest mortality rate {1 out of 29, (3.4%)} followed by duodenal perforation (5.7%). However, the results did not attain statistical significance. When patients were categorized as 'colonic perforation/ mesenteric ischemia' vs. 'non-colonic perforation/ non-mesenteric ischemia', patients in the 'colonic perforation/ mesenteric ischemia' group had significantly higher mortality rates (30% vs. 7%, $p = 0.043$).

Among laboratory parameters, neutrophil counts were significantly higher and lymphocyte counts

were significantly lower among patients with mortality. 'Neutrophil to lymphocyte ratio' (NLR) and 'Platelet to lymphocyte ratio' (PLR) were significantly higher in mortality cases. However, on multivariate analysis, only high NLR was shown to be an independent predictor of mortality in peritonitis patients (OR = 6.898, 95% CI = 1475 – 32.264, p value = 0.014).

Table 2.Comparison of clinical characteristics between patients with and without mortality

Characteristics		No Mortality (n = 126)	Mortality (n = 12)	P-value
Age		42.02 ± 17.6	58.25 ± 17.4	0.003 *
Gender	Female	43 (91.5%)	4 (8.5%)	0.956
	Male	83 (91.3%)	12 (8.7%)	
Diagnosis	Duodenal perforation	50 (94.3%)	3 (5.7%)	0.146
	Appendicular perforation	28 (96.6%)	1 (3.4%)	
	Small bowel perforation	26 (92.8%)	2 (7.2%)	
	Strangulating intestinal Obstruction	10 (83.3%)	2 (16.7%)	
	Colonic perforation	4 (80%)	1 (20%)	
	Mesenteric ischemia	3 (60%)	2 (40%)	
	Others	5 (83.3%)	1 (16.7%)	
Duration of symptoms	< 24 hours	68 (98.6%)	1 (1.4%)	0.006 *
	24 to 48 hours	39 (86.7%)	6 (13.3%)	
	> 48 hours	19 (79.2%)	5 (20.8%)	

** Significant*

Table 3.Comparison of means (±SD) of laboratory parameters between patient with and without mortality

Characteristics	No mortality (n = 126)	Mortality (n = 12)	P-value
TLC/mm3	13800 ± 3166	14700 ± 4609	0.403
Neutrophil (%)	79.2 ± 5.9	86.9 ± 4.2	0.001 *
Lymphocyte (%)	16.8 ± 4.8	8.8 ± 2.6	0.001 *
Platelet/mm3	288000 ± 106775	290000 ± 123256	0.929
NLR	5.24 ± 1.98	10.72 ± 3.39	0.001 *
PLR	138.45 ± 68.56	263.26 ± 154.61	0.001 *

** Significant*

Table 4.Multivariate analysis of factors associated with mortality

Characteristics	Odds ratio	95 % CI		P value
		Lower	Upper	
Age	1.107	0.976	1.257	0.115
Gender	0.370	0.026	5.267	0.463
Duration of symptoms	9.684	0.251	374.34	0.223
NLR	6.898	1.475	32.264	0.014 *
PLR	0.972	0.941	1.005	0.099

* Significant

Receiver operating characteristic (ROC) curve analysis was carried to evaluate the roles of 'Neutrophil to lymphocyte ratio' (NLR) and 'Platelet to lymphocyte ratio' (PLR) in predicting mortality in peritonitis patients undergoing

exploratory laparotomy (Figures 1 and 2). Cutoff points with highest accuracy were also computed for NLR and PLR. Results showed that NLR had higher discriminatory power than PLR (Area under the curve, AUC = 0.928 vs. 0.753).

The cutoff value of NLR for predicting mortality was ≥ 7.91, while cutoff value of PLR was ≥ 273.81. Mortality rate was 41.7% among those with NLR ≥ 7.91 while it was only 1.8% in those with NLR < 7.91. Similarly, patients with PLR ≥ 273.81 had significantly higher mortality than those with PLR < 273.81 (46.2% vs. 4.8%, p = 0.001). At suggested cutoff values, NLR had higher sensitivity compared to PLR. Specificity, PPV, NPV and accuracy were similar for NLR and PLR. Both NLR and PLR had low PPVs and high NPVs suggesting that they are better at ruling out mortality.

Table 5.NLR and PLR in predicting mortality at suggested cutoffs

		Mortality		Total	P value
		No	Yes		
NLR	< 7.91	112 (98.2%)	2 (1.8%)	114	0.001
	≥ 7.91	14 (58.3%)	10 (41.7%)	24	
	Total	126 (91.3%)	12 (8.7%)	138	
PLR	< 273.81	119 (95.2%)	6 (4.8%)	125	0.001
	≥ 273.81	7 (53.8%)	6 (46.2%)	13138	
	Total	126 (91.3%)	12 (8.7%)		

Table 6. Sensitivity, specificity, PPV, NPV and accuracy of NLR and PLR at suggested cutoff values

	AUC	P value	Cutoff	Sensitivity	Specificity	PPV	NPV	Accuracy
NLR	0.928	0.000	≥ 7.91	83.33%	88.89%	41.67%	98.25%	88.41%
PLR	0.753	0.004	≥ 273.81	50.0%	94.44%	46.15%	95.2%	90.58%

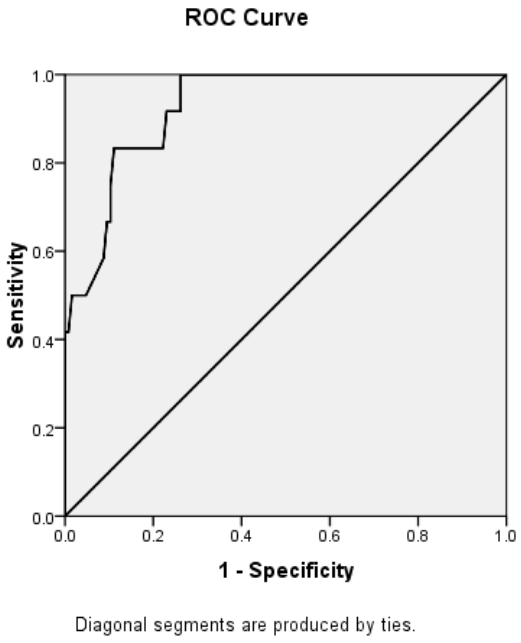

Fig 1.ROC Curve of NLR for predicting in-hospital mortality

Area Under the Curve = 0.928; p = 0.0001

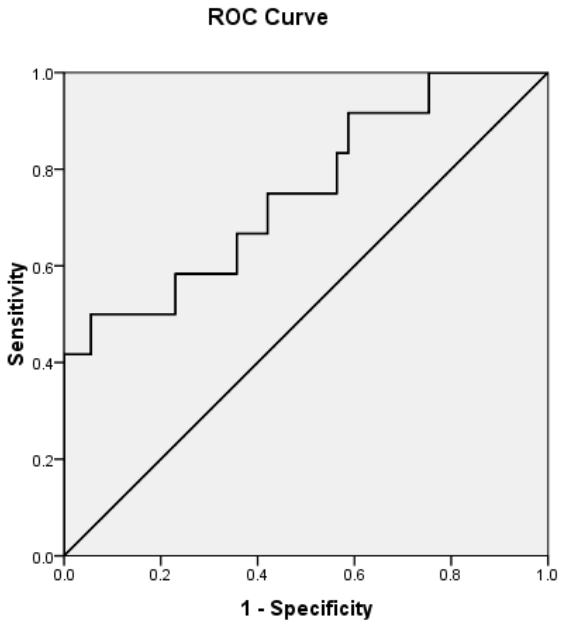

Fig 2.ROC Curve of PLR for predicting in-hospital mortality

Area Under the Curve = 0.753; p = 0.004

DISCUSSION

Although several scoring systems have been evaluated for determining prognosis in patients with peritonitis, few are specific for peritonitis itself. Most of these scores are difficult to apply and require intraoperative data as well.[7, 9] On the other hand, neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) are two simple and preoperatively available inflammatory markers. Neutrophil counts increase and lymphocyte counts decrease during acute inflammation.[21] Similarly, platelets counts are increased in inflammatory states as most inflammatory mediators stimulate megakaryocyte proliferation.[22] This leads to increased NLR and PLR in patients with inflammation. NLR and PLR have been evaluated in patients with appendicitis, sepsis, perforation peritonitis as well as other critically ill patient populations.[12, 15, 17, 18, 23] However there is no consensus regarding the results. Hence, this study was conducted to assess the specific role of NLR and PLR in prediction of mortality among patients with secondary peritonitis undergoing exploratory laparotomy.

Duodenal perforation was the most common cause of peritonitis in our study and appendicular perforation was the next common. In most studies from Nepal as well as India, duodenal perforation is the most common cause for perforation peritonitis.[4, 5, 24, 25] This could be because of a high prevalence of acid peptic diseases in this region.

Overall mortality rate in our study was 8.7%. Shakya et al and Ghosh et al had similar mortality rates of 8.2% and 8.4% respectively.[4, 24] Whereas Shrestha et al and Poudel et al reported slightly higher mortality of 11.5% and 12.2% respectively.[5, 6] On the other hand, a study from India reported a very high mortality of 17.8%.[8] This could be due to longer time to presentation (mean 3.42 days) in their study which is later than our study.

In our study, 'Neutrophil to lymphocyte ratio' (NLR) was significantly higher in mortality cases. On multivariate analysis too, high NLR was shown to be an independent predictor of mortality in peritonitis patients. On receiver operating characteristic curve (ROC) analysis, NLR was shown as an excellent discriminator for mortality in peritonitis with a high area under the curve (AUC) of 0.928 ($p = 0.001$). The cutoff value of NLR for predicting mortality was ≥ 7.91. At suggested cutoff value, NLR had a high accuracy of 88.4%. Sensitivity and specificity were 83.3% and 88.9% respectively.

Shimoyama et al also reported that high NLR was associated with increased mortality in patients with gastrointestinal perforations.[12] In their study, a cut off value of ≥ 13.28 was derived with sensitivity and specificity of 62.5% and 66.7% respectively. The cutoff value in their study was higher than our study whereas their AUC, sensitivity and specificity was lower than our results. The higher cutoff value of NLR in their study could be partly attributed to the difference in study design. Whereas our study included all patients undergoing laparotomy for secondary peritonitis, they included only patients admitted in ICU and only those with GI perforations. Moreover variations in age and gender composition of study subjects between their study and ours might also be the reason. As reported in a study from China, NLR and PLR have been shown to vary by sex and age.[26] A study of 160 patients over 80 years of age with hollow viscous perforation peritonitis found that pre-operative NLR was significantly higher in patients with sepsis and in patients with mortality. They suggested a NLR cutoff value ≥ 8 to predict mortality which is similar to cutoff value in our study.[27] Aydin et al also found that high NLR was a significant predictor of mortality in peptic ulcer perforation.[23] However, Augene et al did not find any relation between NLR and mortality in patients with acute mesenteric ischaemia.[17]

Association of high NLR with worse outcomes in patients with sepsis may be explained by the functions of neutrophils and lymphocytes in inflammation.

Neutrophils are the principal cellular components of host defense against infectious insult, whereas lymphocytes are the major cellular effectors of adaptive immune system.[28] Thus, persistent neutrophilia suggest failure to control the source of infection. On the other hand, sepsis leads to apoptosis of lymphocytes resulting in its reduction and hence immunosuppression.[29] Therefore, patients with high NLR may be in a state of persistent inflammation, along with concomitant immunosupression.[13] Heffernan et al also found persistent lymphopenia and neutrophilia, i.e. high NLR, in patients who met the criteria for systemic inflammatory response syndrome.[28]

'Platelet to lymphocyte ratio' (PLR) was also a significant predictor of mortality in peritonitis in our patients. On ROC analysis, PLR had a fair ability to predict mortality with an AUC of 0.753, which is lower than that for NLR. The cutoff value of PLR was ≥ 273.81. PLR had a high accuracy of 90.6% but sensitivity was only 50%. In a study by Shimoyama et al[12] too, high PLR was a significant predictor for mortality in peritonitis. The cutoff value for PLR was 590.44 in their study. Aydin et al[23] also noted that high PLR was significantly associated with mortality in peptic ulcer perforation patients. In their retrospective analysis of patients undergoing emergency laparotomy for peptic perforation, a PLR value >322.22 had diagnostic value with approximately 75% sensitivity and 98.50% specificity in the differentiation and prediction of the mortality. Their results are similar to our findings. The differences in reported cutoff values of PLR across studies could be reflective of variations of normal PLR by population under study and differences in study design. Normal PLR values have been found to vary by geographic regions.[30, 31] There may also be difference in PLR by gender, with higher values in women than in men in some studies.[31] However one study could not find any relation between PLR and mortality in a group of critically ill patients.[19]

In our study, NLR was a better predictor of mortality in peritonitis compared to PLR. NLR had higher AUC as well as higher sensitivity compared to PLR. Shimoyama et al found that NLR and PLR had equivalent power to predict mortality among patients with perforation peritonitis (AUC 0.57 vs. 0.58 respectively).[12] However in a study of acute mesenteric ischaemia patients, PLR was a significant predictor of 30 day mortality while NLR was not significant.[17]

Therefore we see that more studies are needed to further elucidate the roles of NLR and PLR in predicting mortality in secondary peritonitis. Appropriate cutoff values of NLR and PLR need to be addressed with reference to regional variations. In this regard, studies to find out normal values of NLR and PLR in Nepalese population are desirable.

Our study has certain limitations. Firstly, it is a retrospective, single-center study. Secondly, there were only 12 patients with mortality; so small size of the cohort may have limited the statistical power of the analysis. Thirdly, our study comprised a heterogeneous group of patients with peritonitis due to different aetiology; so the results may not be generalized.

CONCLUSION

High NLR and high PLR were significantly associated with mortality among peritonitis patients. NLR was a better discriminator for mortality in secondary peritonitis compared to PLR (AUC 0.928 vs. 0.758 respectively). The cutoff values for NLR and PLR were ≥ 7.91 and ≥ 273.81 respectively. At suggested cutoffs, NLR had higher sensitivity than PLR (83.33% vs. 50%) but specificity of NLR was lower than PLR (88.89% vs. 94.44%). Further studies are needed to confirm the utility of NLR and PLR in these patients.

CONFLICT OF INTEREST

None to declare

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Original Article

Short term consequences of bile and stone spillage during laparoscopic cholecystectomy

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Abstract

Introduction

Laparoscopic cholecystectomy is the current standard of treatment for symptomatic cholelithiasis. Although laparoscopic cholecystectomy provides benefits like less postoperative pain and shorter hospital stay, it is associated with a higher incidence of bile duct injury and higher incidence of gallbladder perforation leading to bile and stone spillage in comparison to open cholecystectomy.

Methods

We evaluated 153 patients undergoing laparoscopic cholecystectomy for gallstone disease in a single surgical unit of Bir Hospital, National Academy of Medical Sciences from 2019 January to 2020 March. Patients undergoing cholecystectomy for other indications and those with incomplete data were excluded. Patients were divided into four groups – 'Group with no spillage', 'Group with only bile spillage', 'Group with only stone spillage' and 'Group with both bile and stone spillage.' Preoperative and intraoperative factors associated with bile and stone spillage were analysed. Mean operative duration, use of intra-abdominal drain, length of hospital stay and rate of port site infections were compared among the four groups. Independent samples 't' test and ANOVA tests were used for analysis of continuous data and Chi square test was used for categorical data. A p value of < 0.05 was taken as significant.

Result

Mean age of our patients was 46 ± 16.9 years. Out of 153 patients, 103 (67.3%) were female. Gallbladder perforation occurred in 26 (17%) patients. Nine (5.9%) patients had only bile spillage, 5 (3.3%) had only stone spillage and 12 (7.8%) had both bile and stone spillage. Nine (5.9%) patients had port site infections (PSI). Diagnosis of acute cholecystitis (p value 0.032) and presence of a distended gallbladder (p value 0.025) were significantly associated with higher risk of gallbladder perforation leading to spillage of its contents. Spillage of bile and stone significantly prolonged the operative duration as well as hospital stay and increased the use of intra-abdominal drains. There was no significant difference in short term consequences between patients with bile spillage and patients with stone spillage.

Conclusion

Patients with acute cholecystitis and those with distended gallbladders had significantly higher rates of gallbladder perforation during laparoscopic cholecystectomy. Spillage of bile and stone significantly increased the operative duration and length of hospital stay. Type of spillage was not significant in terms of short term consequences.

Keywords

Bile spillage, Complications, Laparoscopic cholecystectomy, Port site infections, Stone spillage

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Introduction

It is estimated that approximately 10% to 15% of the adult population have gallstones making cholelithiasis the second most common indication for operation in general surgery.[1] Laparoscopic cholecystectomy (LC) has now become the current standard of treatment for symptomatic gallstones.[2] Advantages of laparoscopic cholecystectomy over open cholecystectomy (OC) include less postoperative pain, shorter hospital stay and less postoperative infective complications. [1]

However, LC is associated with a higher incidence of bile duct injury[3]compared to OC and also higher incidence of gallbladder perforation leading to bile and stone spillage.[4,5]A systematic review has reported gallbladder perforation rate of 20% and stone spillage rate of 9% in patients undergoing laparoscopic cholecystectomies.[6]Another study of 1059 patients observed bile spillage in 28.9% and stone spillage in 9.7% patients.[5] Perforation of gallbladder may occur due to excessive traction, puncture with toothed instruments, electrocautery, during dissection from liver bed and during extraction of gallbladder. [4,7]

Spillage of bile and stone has been shown to increase the operative duration as well as length of hospital stay.[8] The incidence of complications related to spillage of gallstones during laparoscopic cholecystectomy ranges between 2.3 and 7%.[9] Commonly reported consequences include increased incidence of port site infections, intra-abdominal abscess and abdominal wall sinus formation. [5,8,10,11] Rarely, even urinary excretion of retained gallstones and empyema thoracis have been reported several years after unretrieved gallstones during laparoscopic cholecystectomy. [12,13]

Although there are studies reporting on incidence of bile and stone spillage from our region[10,14,] there is lack of studies that report on factors associated with bile and stone spillage and its consequences. No such study has been previously reported from our institution. Thus this study was conducted to find out the incidence of bile and stone spillage during laparoscopic cholecystectomy, factors associated with this and its short term consequences.

Methods

A retrospective review was carried out to identify all the patients undergoing laparoscopic cholecystectomy for gallstone disease in a single surgical unit of Bir Hospital, National Academy of Medical Sciences from 2019 January to 2020 March. Altogether 265 cases were identified. Patients with diabetes, chronic liver diseases, those on steroids or other immunosuppressive medications and those undergoing cholecystectomy for other indications were excluded. Patients with incomplete data were also excluded.

A structured proforma was used for data collection. Preoperative data including age, gender, duration of symptoms, recent admission for acute cholecystitis and ultrasonography findings were noted. Intra-operatively, duration of surgery, size of gallbladder and its wall thickness, occurrence of bile and stone spillage, use of drain, use of retrieval bag and port of gallbladder extraction were noted. Postoperative variables including length of hospital stay, timing of drain removal and occurrence of port site infections were recorded.

Bile spillage was defined as any spillage of bile during handling, dissection or retrieval of gallbladder. Similarly, any escape of gallstones into peritoneal cavity was recorded as stone spillage. Operative duration was calculated from the time of skin incision till closure of all ports. Hospital stay was measured from the day of surgery to the day of discharge. Port site infection (PSI) was defined as superficial or deep incisional surgical site infection (SSI) occurring at the site of laparoscopic trocar insertion. Superficial and deep incisional SSIs were defined according to CDC/NHSN criteria 2017.[15]

Statistical Analysis

Patients were divided into four groups – 'Group with no spillage', 'Group with only bile spillage', 'Group with only stone spillage' and 'Group with both bile and stone spillage.' Preoperative and intraoperative factors associated with bile and stone spillage were analysed. Short term consequences (30 day post-operative) were also evaluated. Mean operative duration, use of intra-abdominal drain, length of hospital stay and rate of port site infections were compared among the four groups. Continuous data are presented as mean ± SD. Categorical data are presented as proportions. Independent samples 't' test and ANOVA tests were used for analysis of continuous data and Chi square test was used for categorical data. A p value of < 0.05 was taken as significant.

Results

Overall characteristics of patients undergoing laparoscopic cholecystectomy are shown in Table 1. Out of 153 patients, 21 (13.7%) had acute cholecystitis and 23 (15%) had chronic cholecystitis as determined by intraoperative findings. Gallbaldder perforation occurred in 26 (17%) patients. Nine (5.9%) had only bile spillage, 5 (3.3%) had only stone spillage and 12 (7.8%) had both bile and stone spillage. Nine (5.9%) patients had port site infections (PSI). All PSIs occurred at umbilical port which was the port of gallbladder extraction in our study.

Table 1.Overall characteristics of patients undergoing Laparoscopic Cholecystectomy

Characteristic		Frequency (%) N = 153
Mean age (years)		46 ± 16.9 (18-81)
Gender	**Female**	103 (67.3%)
	Male	50 (32.7%)
Intraoperative diagnosis	**Acute cholecystitis**	21 (13.7%)
	Chronic cholecystitis	23 (15%)
	Non acute/ non chronic	109 (71.2%)
Number of stones	**Multiple**	121 (79.1%)
	Single	32 (20.9%)
Gallbladder perforation during LC	**No**	127 (83%)
	Yes	26 (17%)
Spillage type	**None**	127 (83%)
	Bile only	9 (5.9%)
	Stone only	5 (3.3%)
	Bile and stone	12 (7.8%)
Drain use	**No**	139 (90.8%)
	Yes	14 (9.2%)
Mean operative duration (Minutes)		58.27 ± 19.7 (35-145)
Mean Hospital stay (Days)		2 ± 0.8 (1-5)
Port site infection	**No**	144 (94.1%)
	Yes	9 (5.9%)

Presence of acute cholecystitis was significantly associated with gallbladder (GB) perforation. Presence of distended gallbladder was another factor for increased risk of gallbladder perforation. Among those with distended gallbladders, 31% had GB perforation compared to 13.7% perforation in those with non distended gallbladders (p value = 0.025) Meanwhile, age and gender of patient and

number of gallstones had no significant association with gallbladder perforation (Table 2). Analysis of short term outcomes revealed that patients with gallbladder perforation had significantly longer operative times and length of hospital stay compared to those without perforation. Use of intra-abdominal drains was also significantly increased due to perforation. Although, port-site infection rates were higher in those with gallbladder perforation, the results did not reach statistical significance (Table 3).

Table 2.Factors associated with gallbladder perforation during LC

		No perforation (n = 127)	Perforation (n = 26)	P value
Mean age (years)		46.54 ± 17.379	43.85 ± 14.611	0.462
Gender	**Female**	84 (81.6%)	19 (18.4%)	0.492
	Male	43 (86.0%)	7 (14.0%)	
Acute cholecystitis	**No**	113 (85.6%)	19 (14.4%)	**0.032 ***
	Yes	14 (66.7%)	7 (33.3%)	
Thick gallbladder wall	**No**	101 (85.6%)	17 (14.4%)	0.118
	Yes	26 (74.3%)	9 (25.7%)	
Distended gallbladder	**No**	107 (86.3%)	17 (13.7%)	**0.025 ***
	Yes	20 (69.0%)	9 (31.0%)	
Stone number	**Single**	29 (90.6%)	3 (9.4%)	0.197
	Multiple	98 (81.0%)	23 (19.0%)	

Table 3.Comparison of outcomes between patients with and without gallbladder perforation

		No perforation (n = 127)	Perforation (n = 26)	P value
Mean operative duration (minutes)		54.06 ± 15.682	78.85 ± 24.303	**0.001 ***
Mean hospital stay (days)		1.94 ± 0.634	2.58 ± 1.172	**0.001 ***
Drain Use	**No**	123 (96.9%)	16 (61.5%)	**0.001 ***
	Yes	4 (3.1%)	10 (38.5%)	
PSI	**No**	121 (95.3%)	23 (88.5%)	0.179
	Yes	6 (4.7%)	3 (11.5%)	

We also compared the results of the four patient subgroups – those with no spillage, those with only bile spillage, those with only stone spillage and those with both bile and stone spillage. Additionally, we compared patients with no spillage to those with only bile spillage and to those with only stone spillage. Finally, outcomes of patients with bile spillage were compared to those with stone spillage.

Acute cholecystitis and distended gallbladder significantly increased the risk of both bile and stone spillage. Duration of surgery as well as hospital stay also increased significantly with spillage as shown in Table 4. Patients with any type of spillage (only bile spillage, only stone spillage or both bile and spillage) had significantly longer operative times compared to those with no spillage. Spillage of both bile and stone increased the hospital stay significantly. However, those with only bile or only stone spillage had similar hospital stay compared to those with no spillage(results not shown).Comparing patients with bile spillage to those with stone spillage, the results were not significantly different interms of operative time, hospital stay, rate of drain use or rate of port site infections (Table 5).

Table 4.Comparison of patients by type of spillage

		Spillage Type					
		NONE	BILE	STONE	BOTH	Total	P value
		N = 127	N = 9	N = 5	N = 12	N = 153	
Mean age (years) ± SD		46.5 ± 17.4	38.2 ± 12.3	43.2 ± 16.9	48.3 ± 15	46.08 ± 16.9	0.535
Acute Cholecystitis	**NO**	113 (89%)	8 (88.9%)	4 (80%)	7 (58.3%)	132 (86.3%)	**0.030 ***
	YES	14 (11%)	1 (11.1%)	1 (20%)	5 (41.7%)	21 (13.7%)	
Thickened gallbladder	**NO**	101 (79.5%)	7 (77.8%)	4 (80.0%)	6 (50.0%)	118 (77.1%)	0.142
	YES	26 (20.5%)	2 (22.2%)	1 (20.0%)	6 (50.0%)	35 (22.9%)	
Distended gallbladder	**NO**	107 (84.3%)	7 (77.8%)	4 (80.0%)	6 (50.0%)	124 (81.0%)	**0.038 ***
	YES	20 (15.7%)	2 (22.2%)	1 (20.0%)	6 (50.0%)	29 (19.0%)	
No of stone	**Multiple**	98 (77.2%)	8 (88.9%)	4 (80.0%)	11 (91.7%)	121 (79.1%)	0.581
	Single	29 (22.8%)	1 (11.1%)	1 (20.0%)	1 (8.3%)	32 (20.9%)	
Drain Use	**NO**	123 (96.9%)	8 (88.9%)	4 (80.0%)	4 (33.3%)	139 (90.8%)	**0.000 ***
	YES	4 (3.1%)	1 (11.1%)	1 (20.0%)	8 (66.7%)	14 (9.2%)	
PSI	**NO**	121 (95.3%)	9 (100.0%)	4 (80%)	10 (83.3%)	144 (94.1%)	0.158
	YES	6 (4.7%)	0 (0%)	1 (20.0%)	2 (16.7%)	9 (5.9%)	
Mean Operative duration		54.1 ± 15.7	68.3 ± 13.7	75 ± 26.22	88.33 ± 27.6	58.27 ± 19.7	0.009 *
Mean Hospital stay		1.94 ± 0.63	1.78 ± 0.44	2.4 ± 1.52	3.25 ± 1.05	2.05 ± 0.79	0.001

Table 5.Patients with Bile Spillage vs. Stone spillage: Outcomes

		Bile Spillage (n = 9)	Stone spillage (n =5)	P value
Mean operative duration (minutes)		68.33± 13.693	75.00± 26.220	0.537
Mean hospital stay (days)		1.78± 0.441	2.40± 1.517	0.618
Drain Use	**No**	8 (88.9%)	4 (80.0%)	0.649
	Yes	1 (11.1%)	1 (20.0%)	
PSI	**No**	9 (100.0%)	4 (80.0%)	0.164
	Yes	0 (0%)	1 (20%)	

Discussion

Laparoscopic cholecystectomy has several advantages over open cholecystectomy like less postoperative pain, shorter hospital stay and less postoperative infective complications.[1] However, in those with bile and stone spillage, this benefit may be offset by complications resulting from spillage. Laparoscopic cholecystectomy has been found to be associated with higher incidence of gallbladder perforation.[5] Resulting spillage of bile and stone may have adverse consequences like increased postoperative ileus, more postoperative pain and increased incidence of port site infections in the short term.[8,10,16] Although infrequent, late and serious complications have also been reported.[12,13] So it is vital to have an awareness of factors associated with increased risk of bile and stone spillage and its effects on outcome, particularly in our settings. We conducted this study to evaluate the risk factors for and outcomes of gallbladder perforation during laparoscopic cholecystectomy.

The rate of gallbladder perforation in our study was 17%.This is within ranges reported by most studies. A prospective study of 198 patients found GB perforation in 16.7% patients.[8] A systematic review also reported gallbladder perforation in 20%.[6] However, one study noted bile spillage in 59% and stone spillage in 20.2%.[17] High rates in their study

could be because of a high proportion (49.9%) of their patients having acute cholecystitis.

We found that incidence of bile and stone spillage was significantly higher in those with acute cholecystitis. Similarly, distended gallbladder was also a significant risk factor for gallbladder perforation in our study. A systematic review also identified acute cholecystitis as a significant risk factor for intraoperative gallbladder perforation.[6] This could be because patients with acute cholecystitis usually have distended gallbladder with friable walls making it more susceptible to tear during handling and dissection. Moreover, dense adhesions make dissection potentially more difficult in acute cases. Meanwhile a distended gallbladder is more prone to puncture while grasping. [18]

We noticed that patients with any type of spillage (bile or stone or both) had significantly longer operative times as well as longer hospital stay compared to those without spillage. This is in congruence with most published studies.[8,6,17] Longer operative times in patients with spillage might partly be due to time spent in irrigation and retrieval of spilled stones. In the present study, irrigation was performed in 4.7 % of those without spillage and 72% of those with spillage ($p = 0.001$). Similarly, longer hospital stay could be the result of greater use of intra-abdominal drains in those with spillage compared to those without spillage (38.5% vs. 3.1%, $p = 0.001$). In our study hospital stay was significantly prolonged in patients with drains compared to those without drains (3.29 vs. 1.93 days, $p = 0.001$).

Nine (5.9%) patients had port site infections (PSI) in our present study. Our PSI rate is slightly higher compared to another study which has reported PSI rate of 4.5%.[19]In the same study, acute cholecystitis was a significant risk factor for PSI. In our study too, PSI rate was higher in those with acute cholecystitis; but it did not reach statistical significance. Our routine practice to use retrieval bags for extracting acutely inflamed gallbladders might have resulted in lower infection rates so that the association was not noticed. DC Rice reported intra- abdominal abscess in 1 (0.6%) out of 177 with spillage of only bile, and in 3 (2.9%) out of 103 patients with spillage of both bile and gallstones, where 306 out of 1059 had GB perforation during laparoscopic cholecystectomy whereas no intra-abdominal abscesses occurred in the 697 patients when the gallbladder was removed intact.[5]

Apart from short term adverse consequences discussed above, rare yet troublesome complications might result due to spillage of bile or stones specially when left unretrieved. Empyema thoracis, urinary excretion of gallstones, late development of loin abscess and omental abscess have also been reported. [12,13,18,20] In a retrospective study, among 82 patients with incidental gallbladder adenocarcinoma on post-laparoscopic cholecystectomy specimen, patients with bile spillage had significantly higher rate of peritoneal carcinomatosis, greater distant spread rate and worse median overall survival compared to those without bile spillage.[21]Thus consequences of bile and stone spillage cannot be ignored. However Manuk in his study of 580 laparoscopic cholecystetomy revealed no harm caused by retained gall stones during LC.[22]

Although intraoperative gallbladder perforation may be minimized with meticulous technique, it cannot be avoided altogether. Thus it is necessary to deal adequately with spilled bile or stone so that its complications may be prevented. The first and foremost is to do copious irrigation and aspiration of spilled gallbladder contents. It is also important to retrieve as much stones as possible because unretrieved stones have been known to rarely cause serious complications at remote locations and after long time intervals.[12,13,23] Documentation of spilled stones, especially when complete retrieval was not possible, is equally important. Patient should be informed as well. With clear documentation and patient awareness, early diagnosis and timely treatment of stone related complications is made possible.[24] The surgeon should keep such patients on a long term follow up as delayed complications

might occur. C Barrat documented no morbidity in patients who had iatrogenic preoperative perforation, provided retrieval of all spilled stones and treating bile contamination with local irrigation and antibiotics.[25]

Our study has certain limitations. Firstly, a small sample size mean comparisons may not be generalized. Secondly, intraoperative diagnosis of acute or chronic cholecystitis or distended gallbladder in our study was subjective and reporting of findings may have been biased.

Conclusion

Patients with acute cholecystitis and distended gallbladders had significantly higher rates of gallbladder perforation during laparoscopic cholecystectomy. Mean operative duration and hospital stay was significantly prolonged as a consequence of spillage. However, type of spillage was not significant in terms of short term consequences. In the event of spillage, copious irrigation with saline, attempts to completely retrieve spilled stones and routine use of retrieval bags can minimize infectious complications at the port site due to bile and stone spillage.

Conflict of interest: None

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Original Article

Low Cost Laparoscopic Groin Hernia Repair in Bir Hospital

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Abstract

Background: Laparoscopic groin hernia repair is at the point of progress in Nepal. Major drawback in its wider acceptance is due to higher cost. Total Extraperitoneal Hernioplasty requires no fixation according to current recommendation. Unfolding of mesh and mesh placement is easier and less time consuming in 3D preshaped mesh than in flat mesh. Except the mesh placement time, there is no other difference between pre-shaped mesh and flat mesh. The current study is to look into Total Extraperitoneal Hernia repair for the purpose to establish Total Extraperitoneal repair as a primary groin hernia repair with no added cost.

Method : This is a retrospective observational study done in single unit Bir Hospital, NAMS within the duration of one year from October 2017 to September 2018. Inclusion criteria were all patient who underwent Laparoscopic Total Extraperitoneal repair with no fixation using flat polypropylene mesh. Data including demography profile, pre-operative comorbidity and risk factors, operative techniques, operative time, mesh fixation time, hospital stay, post operative pain score, scrotal swelling were collected.

Results: Total 24 patients were included male: female ratio 22:2. Only flat polypropylene either heavy weight or lightweight mesh was used in all patients and fixations were not done for any patient. Mean age of patients was 34 years; mean operative time 52.26 minutes for unilateral hernia whereas 105.42 minutes for bilateral hernias, mean mesh placement time was 5.28 minutes. None of the patients had the recurrence in one year follow up.

Conclusion: Laparoscopic hernia repair with flat mesh with no fixation can be offered as low cost technique for primary groin hernia.

Keywords: Groin Hernia, TEP, Low cost technique

Introduction:

Laparoscopic groin hernia repair is at the point of progress in Nepal. Major drawback in its wider acceptance is because of additional cost of pre-shaped mesh and the cost of fixation device. Lifetime occurrence of groin hernia is 25-40% in male 3-6% in female.[1] Groin Hernia repair is commonly done procedure worldwide, almost 20 million hernia surgery done annually.[1] Laparoscopic Hernia repair is not widely done even in good resource country.[2] Laparoscopy hernia surgery compared to open hernia confers less postoperative

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pain, earlier return to daily activities, earlier return to work and no difference in long-term complication.[2] Laparoscopic groin hernia surgery accounts only of total groin hernia repair of 55%in Australia, 40%in Switzerland, 45% in Netherland and 28% in Sweden.[3] Major hindrance in wider acceptability of laparoscopic groin hernia repair is technical expertise and additional cost. Additional cost for laparoscopic groin hernia in North America is by $638 compared to Open hernia mesh repair.[3] It cost more in laparoscopic groin hernia compared to open hernia by 300-350 pounds in England and 710.[6] Euro in Sweden.[4] Added cost in laparoscopy groin hernia is due to use of fixation device and use of pre-shaped soft mesh. As there are two types of Laparoscopy hernia repair (1) Trans abdominal Pre-peritoneal (TAPP) and (2) Totally Extra-peritoneal repair (TEP). Many studies have shown there is no difference in outcome between TEP and TAPP repair. International hernia surgery study group has suggested for TEP over TAPP for primary inguinal hernia repair in adult patient.[5] Fixation is not required in TEP.[5] There is no difference between Heavy weight mesh and Lightweight mesh in terms recurrence, early and late complication.[5] This study is to look into opting TEP with no mesh fixation using flat polypropylene heavyweight mesh as a low cost technique as a primary laparoscopy hernia repair in our hospital.

Method :

This is a prospective observational study on retrospectively maintained data done in single unit Bir Hospital, National Academy of Medical Sciences (NAMS) within the duration of one year from October 2017 to September 2018. Inclusion criteria were all patient who underwent Laparoscopic TEP repair with no fixation using flat polypropylene mesh and Heavyweight (HW) mesh. For all patients standard TEP procedure was done with three ports placement 10mm at umbilicus and other two 5mm ports, one 5mm port at 1cm above suprapubic bone and other 5mm port at the middle of umbilical port and suprapubic port (picture1).Telescopic dissection was done on pre-peritoneal space by to and through movement (picture 2). Cooper's ligament was identified as first anatomic landmark in TEP. Laterally, dissection was done in an avascular plane upto the landmark of anterior superior iliac spine. Hernia sac was reduced or ligated. Triangle of doom was defined after full peritoneal reflection. Flat heavyweight polypropylene mesh of size 15x10 cm was done in the pre-peritoneal space (picture 3). Mesh was spread out covering myo-pectineal orifices and no fixation device was used in any of the cases (picture 5).

The objective of the study was to see the intraoperative and post-operative outcome using low cost polypropylene flat mesh, without tacker fixation of the mesh in TEP procedure. Prospectively maintained data including demography profile of the patients, pre-operative comorbidity and risk factors, operative techniques, operative time, mesh placement time, hospital stay, post operative pain scores, immediate complication like recurrence, scrotal swelling were recorded. All patients were on regular follow up for the period of one year, complications were noted and followed up with telephonic conversation. All data was analyzed using SPSS 8.0 software.

Table 1 Demographics

Patients, n	24	
Age, years (SD)	34.4(16.2)	
Gender, n	Male	22
	Female	2
Laterality, n	Unilateral	21
	Bilateral	3
Recurrent	1	

Table 2 : Comorbidities and Risk factor

Smoking n (%)	13 (54%)
Family History	4(16%)
Chronic Constipation	1(4.1%)
Obesity	1(4.1%)
Hypertension	3
Hypothyroidism	1
Diabetes	1
Hypertension with diabetes	1

Results:

Twenty four patients had undergone Total Extraperitoneal (TEP) procedure. Twenty one patients had undergone unilateral TEP whereas other three had bilateral TEP. Twenty-two were male patients, only two patients were female patients. One patient had recurrent hernia. Average age of patients was 34.4 ranging from 19 years to 72 years. Six patients had comorbidities and nineteen patients had known risk factors for hernia occurrence. Majority of our patients had indirect hernia 13(54%), 2(8%) had femoral hernia and both were female patients.(table 1)

During surgery, peritoneal breach occurred in 3(12.5%) patients, those were clipped before mesh placement. There was no injury to cord structure. Intraoperative bleeding occurred in one patient due to injury to inferior epigastric vessel, that was controlled with the metallic clip. Mean operative time was 54.4 minutes with standard deviation of 12.5 minutes for unilateral hernia and that was 105 minutes with standard deviation of 15.6 minutes for bilateral hernia. Mean mesh placement time for flat polypropylene mesh that we used for all patients was 4.5 minutes. Mean pain score on post operative day 1 was 3.5. All patients were discharged on post-operative day 1, so mean hospital stay was one day. Seroma occurred on two patients managed by aspiration. There was no recurrence and mesh infection during the follow period of two years. (Table 2)

Same flat prolypropylene 15x10 cm mesh, that is being used for open mesh repair was used in TEP procedure as well, without tacker fixation. Total cost for TEP surgery was RS 9000 to the patient. Reduction of the cost to patient for TEP by Ruppes 38000 by not using 3D pre-shaped mesh and fixation tacker as 3D pre-shaped mesh cost RS 20000 and fixation tacker cost RS 18000 as of current market price.

Table 3 : Types of hernia

Indirect, n	13 (54%)
Direct, n	5 (20%)
B/L Indirect, n	2 (8%)
B/L Direct, n	1 (4%)
Femoral, n	2 (8%)
Recurrent Indirect, n	1 (4%)
Left, n	11 (46%)
Right, n	10 (41%)
B/L, n	3 (13%)

Table 4 : Intraoperative, Post operative variables and complication

Variables		
Peritoneal breach, n (Percentage)	3(12.5%)	
Injury to cord structures, n	None	
Intra op Bleeding, n	1	
Mean Operative time, Mins (SD)	U/L	54.5(12.5)
	B/L	105(15.6)
Mean Mesh placement time, Mins (SD)	4.5 (2.3)	
Mean Pain Score on POD1 (SD)	3.5 (1.5)	
Mean Hospital Stay day	1	
Seroma	2	
Recurrence	None	
Mesh Infection	None	

Discussion:

Laparoscopy hernia surgery provides improved compliance in immediate post-operative period. Laparoscopic hernia repair offers significantly less pain in early weeks of post-operative period.[6] Patient satisfaction and observed cosmesis is better with laparoscopic hernia repair compared to open hernia repair.[7] Comparing TEP and TAPP repair, TEP repair has additional advantage of not breaching the peritoneum. However, there is no long time difference between those two procedures. Cost is a major hindrance to adopt laparoscopy hernia surgery in resource poor setting in a country like in Nepal. Using pre-shaped mesh along with mesh fixation tacker in laparoscopic hernia repair incurs added cost compared to open repair. This added cost hinders laparoscopic hernia repair

acceptance to all patients. As TEP repair dose not require fixation and using flat mesh in laparoscopy hernia repair make laparoscopy hernia repair cost comparable to open mesh repair.[5] Cost should not be hindrance to offer benefit of laparoscopy repair to all economic status of the patients

Laparoscopy hernia causes significantly less pain at early 1-2 weeks and late after 2 weeks compare to open hernia.[8] Study has shown that there is no mesh displacement even without mesh fixation.[9] For female patient groin hernia TEP is the procedure of choice.[5] Using flat mesh or pre-shaped mesh will not differ in long time outcome of the patient.[10] We preferentially do TEP procedure to all patients and use flat mesh to reduce the cost significantly so that benefit of laparoscopy can be offered to all patients irrespective of affordability of patients. On one year follow up there is no any recurrence or any complication.

In the context of Nepal, Laparoscopy hernia repair in several major canters are performed as a safe procedure with better patient compliance compared to open hernia repair.[11] Reducing cost and giving benefit of minimal invasive surgery benefit to the patient without added cost is objective of adopting Total Extra-peritoneal repair with flat mesh use in our Surgery unit.

Conclusion:

Laparoscopic TEP repair with flat mesh with no fixation can be offered as low cost technique for primary groin hernia.

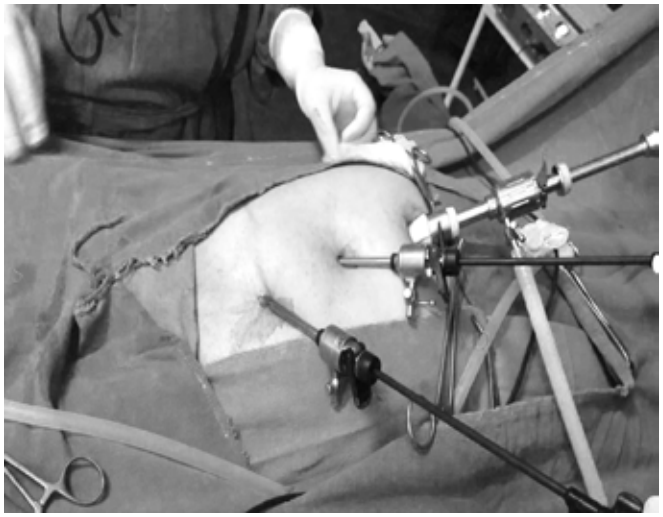

Fig: 1

Fig: 2

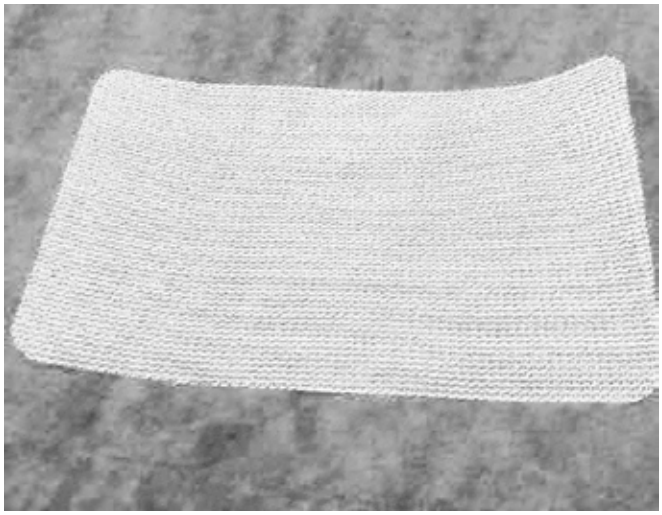

Fig: 3

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Original Article

Comparison of Perinatal Outcome Between Teenage Mothers and Mothers aged 20-29: A Cross-Sectional Study

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Abstract

Introduction : Adolescent pregnancy is a major public health problem throughout the world including Nepal. Teenage mothers and unborn babies are at greater risk of complications. Many studies done in the past decade have documented the negative social, economic and health consequences for women who have given births during adolescence. However some studies revealed that there were no differences between children of teenage and older mothers in terms of prematurity or birth weight. Only few studies have been done in health aspect of teenage pregnancy in Nepal with inconsistent results. This study will focus on perinatal outcome of teenage population as compared to adult mothers.

Method : This was a hospital based observational study conducted in the Obstetrics department of Western Regional Hospital from 10th November 2017 to 10th February 2018.

Result : The mean age at marriage in teenage respondents is 17.25 years compared to 19.77 years in adults.4.3% of teenage mothers were in second gravid. Normal delivery was the common mode of delivery among both the groups (74.8% vs. 69.8%, p=0.643). The complications of labor were more prevalent among teenage mothers in general (16.54 vs. 12.94%, p= 0.946).regarding neonatal health outcomes, preterm delivery was 12.2% in teenage as compared to 8.6% in adults(p=0.327).Proportion of babies with low Apgar score at 1min was 14.4% in teenage as compared to 12.9% in adults(p=0.494).The low birth weight baby among teenage and adult mothers were 25.2 % and 13.7% respectively (p=0.015), the only parameter that was found to be statistically significant.

Conclusion : Regarding the perinatal outcomes, preterm delivery, low birth weight and babies with low Apgar score were found more in teenage group as compared to adult, however only low birth weight was statistically significant.

Key Words: Adolescent pregnancy, Pregnancy complications, Preterm delivery

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INTRODUCTION

WHO defines adolescents as individuals in the 10-19 years age group.[1] It is a phase of development from the appearance of secondary sexual characteristics to sexual and reproductive maturity. Teenage pregnancy is a significant health and social problem in many parts of the world. Approximately 12 million girls aged 15-19 years and at least 777000 girls under 15 years give birth each year in developing region.[2, 3] Complications during pregnancy and childbirth are the leading cause of death for 15-19 year old girls globally.[4]

In Nepal, 17% of women start childbearing as early as between 15-19 years of age, 13% of them had a live birth and 4% are pregnant with their first child. The maternal mortality ratio for Nepal according to NDHS 2016 is 239 per 100, 000 live births.[5]

Teenage pregnancy is associated with increased risk of many unfavorable maternal and fetal outcomes. They suffer more from hypertensive disorders[6], have high rate of inadequate prenatal care, suffer more from anemia, UTI, more likely to deliver preterm and have LBW babies.[7, 8] They have high rate of operative and instrumental delivery[9, 10], puerperal endometritis and systemic infection.[11] However some studies showed that teenage pregnancy generally should not be considered as high risk situation if taken good care during prenatal period[12, 13]and medical complications were also not significantly different between teenage and older mothers assuring the socioeconomic status of both groups as similar.[14]

Teenage pregnancy and motherhood is a major social and health issue of our country. Some studies further revealed that there are certain factors which determine the outcome of pregnancy in teenage mothers like health care system, nutritional status of mother and support system from family.[15] Only few studies have been done in Nepal regarding this topic with inconsistent results.

METHODS

It is a cross sectional observational study, done in Western Regional Hospital, Pokhara which is a referral hospital of western region. There were 2914 deliveries over duration of 3 months, among which 327 cases were teenagers i.e 11.22%. Delivery is generally attended by trained nursing staff except complicated cases. Teenage and adult mothers aged 20-29 years who delivered in the hospital from November 2017-February 2018 were recruited in the study using non-probability sampling. Sample size was calculated with reference to prevalence of teenage pregnancy (NDHS 2016) which came out to be 278, 139 teenage and 139 adult mothers. Women with pre-existing medical diseases (heart disease, chronic hypertension, overt diabetes, renal disorders) and twin pregnancy were included.

Required data like maternal and neonatal outcomes were collected from the inpatient file of the participants whereas socio demographic and obstetric information was obtained by interviews using predesigned questionnaire. SPSS version 20 was used for analysis. Descriptive statistics (percentage, mean, SD) were used to determine the difference between two groups. Chi square test was used for statistical analysis, level of significance for all analytical tests was set 0.05 and p value<0.05 was considered significant. Ethical clearance was taken from institutional review board of IOM and written consent was taken before data collection.

Teenage mother were defined as mother irrespective of parity and gravida at the ages between 15-19 years and adult mothers as mother irrespective of parity and gravida at the ages between 20-29 years

Regarding Educational status (5), mothers were categorized as Illiterate(who Cannot read and write), Non-formal (who Can read and write) Primary Education (Up to Grade V), Secondary Education (Grade VI to X) and Certificate and above

Regarding Maternal outcomes data collected were as according to Mode of delivery, duration of labor, and complications as Perineal tear, Retained placenta, Premature rupture of membrane and PPH

Neonatal outcomes were noted in terms of Birth weight of baby, Gestational age at delivery, Apgar score at 1 min and Neonatal death (death within 24 hours)

Duration of labor (15) were defined as Normal if l ess than 18 hours and Prolonged labor if labor is lasting 18 or more than 18 hours .

Birth weight of baby: (16) was considered Normal if Baby born ≥ 2500 grams and low birth weight if baby born below 2500 grams

Gestational age at delivery was taken as Full term if 37 completed weeks or more and Preterm if less than 37 weeks.

RESULTS

A total of 278 participants were included in the study (teenage 139 and adult 139). Regarding ethnicity, Janajati were seen more in teenage group i.e 28.05% and Brahmin more in adult group 30.9%.Hindu was seen predominantly in both the groups 92.8% in both groups. Joint family was seen more in teenage group (85.6%) than adult group (75.5%).

Table 1: Socio-demographic information of the respondents

Variables	Teenage (15-19 years) n=139	Adult (20-29years) n=139
Ethnicity		
Brahmin	29 (20.9%)	43 (30.9%)
Chhetri	32 (23.02%)	30 (21.6%)
Newar	3 (2.2%)	4 (2.9%)
Mongolian	36 (26.5%)	28 (20.1%)
Janajati	39 (28.05%)	34 (24.5%)
Religion		
Hindu	129 (92.8%)	129 (92.8%)
Buddhist	8 (5.7%)	7 (5.1%)
Muslim	1 (0.7%)	3 (2.1%)
Christian	1 (0.7%)	0
Literacy of mothers		
Illiterate(	2 (1.4%)	2 (1.4%)
Non formal	8 (5.8%)	17 (12.23%)
Primary	50 (36.0%)	46 (33.09%)
Secondary	55 (39.6%)	56 (40.28%)
Certificate and above	24 (17.3%)	17 (12.23%)
Literacy of husbands		
Illiterate	2 (1.4%)	0
Non formal	5 (3.6%)	4 (2.9%)
Primary	44 (31.7%)	36 (25.9%)
Secondary	56 (40.3%)	56 (40.3%)
Certificate and above	32 (23.0%)	43 (30.9%)

Illiterate: Cannot read and write, Non-formal if can read and write, Primary Education-Up to Grade V, Secondary Education-Grade VI to X and education certificate level and above

Type of family		
Joint	119 (85.6%)	105 (75.5%)
Nuclear	20 (14.4%)	34 (24.5%)

Mean age of respondents in teenage group was 18.32±0.86 years and 24.16±2.76 years in adult group.Mean age of husband was 22.65±3.07 years in teenage group and 29.12±4.48 years in adult group. Age of the respondent at marriage was 17.25±1. 1 years in teenage group and 19.77±3.1 in adult group. Age of the respondent at first pregnancy was 17.73±0.92 years in teenage group and 20.92±2.96 years in adult group.

Nearly 17% of teenage mothers have completed certificate and above level of education as compared to 12.23% in adults. However regarding literacy of husband's number is more in adult mothers than that of teenage mothers. About 31% of husbands of adult mothers have completed certificate and above level of education compared to 23% in husbands of teenage mothers.

Table 2: Obstetric information

Variables	Teenage (n=139)	Adult (n=139)
Gravida		
1	133 (95.7%)	69 (49.7%)
2	6 (4.3%)	47 (33.8%)
3	0	23 (16.5%)
ANC Visits		
No visit	0	1 (0.7%)
1-4 visits	10 (7.2%)	18 (12.9%)
>4 visits	129 (92.8%)	120 (86.3%)
Iron intake		
No	8 (5.7%)	11 (7.9%)
Yes	131 (94.3%)	128 (92.08%)
Maternal haemoglobin		
<11 gm%	16 (11.5%)	17 (12.2%)
>11 gm%	123 (18.5%)	122 (87.8%)

Regarding obstetric history, majority were primigravida in teenage group with only 4.3% being second gravida.In adult group also majority were primigravida(49.7%), 33.8% second gravida and 16.5% third gravida.Most of the participants from both the groups have made good ANC visits. Most of the participants took iron supplement during pregnancy. Despite good ANC visits and iron supplement still 11.5% of teenage and 12.2 % of adults have haemoglobin level < 11 gm%.

Study showed that prolonged duration of labor was seen more in adult group. Regarding mode of delivery, caesarean section and instrumental deliveries were seen slightly more in adult group. Complications of labor like retained placenta and PROM were seen more in teenage group and PPH was seen more in adult group. However none of the findings were statistically significant.

Mean birth weight of baby born to teenage mother is 2807.8±470.54 gm, and to that of adult mother is 2931.5±510.98 gm. Preterm delivery, Apgar score less than 7/10 and low birth weight babies were seen more in teenage group. The low birth weight baby born to teenage mothers was 25.2% and to adult mothers was 13.7%.The relationship between age of the mother and birth weight was found significant. (p=0.015)

DISCUSSION

Early pregnancy and childbearing has many health and social implications for girls. The study found that mean age of the teenage respondent at marriage and first pregnancy was 17.25 and 17.73 and for adults 19.77 and 20.92 respectively. Despite the law governing age for marriage, early or teenage marriage takes place. Under the Marriage Registration Act the minimum legal age of marriage in Nepal is 20 years for both girls and boys and 18 years with parental consent. Regarding the level of education, majority of the adult respondents were found to receive certificate and above (35.3%) level of education as compared to teenage respondents where majority were found to be in secondary level(39.6%) whereas not much difference was found between the literacy of respondents and their husbands.

The proportion of illiterate individual was found to be negligible in groups, 1.4% teenage and 0.7% adult mothers. This might be due to increased awareness regarding education. The economic status could be another reason which has not been assessed in this study. It is significant to notice 4.3% of teenage mothers with second gravida. Women who get pregnant during adolescence are likely to have second pregnancy sooner. As preference for male child is very strong in all Nepalese societies, a young mother is expected to continue childbearing until the desire is fulfilled. The study shows that more than 80% of teenage and adult mothers made more than four ANC visits which is higher than the national percentage(69%) as per NDHS 2016. It may be due to easy accessibility and better services provided by the hospital.

Nutritional status is an important indicator of overall health and also a predictor of pregnancy outcome for both the mother and the child. In this study 11.5% of teenage and 12.2% of adult mothers were found to be anemic (Hb<11gm%).The NDHS 2016 shows 43.6% pregnant women of 15-19 years age are anemic with 42.7% in 20-29 years age. Both studies showed that there was not much difference in the nutritional status of teenage and adult mothers. This is supported by a study conducted by Sulaiman et al.[17]Also the nutritional status of teenage mothers was not found to be impaired, as seen in most of the studies. This is comparable with the study by Scholl et al.which showed a secular decline in maternal anemia in comparison to the risk sustained by more mature women in developed world. Programs of comprehensive prenatal care appeared to have the potential to diminish risk of many complications. However in the developing world, teenagers were at increased risk.[18] The reason could be the adequate number of antenatal visits and regular iron intake among the respondents.

Table 3: Maternal health outcomes in the respondents

Variables	Teenage n=139	Adult n=139	p value
Duration of labor			
Normal	131 (94.2%)	126 (90.6%)	0.256
Prolonged	8 (5.8%)	13 (9.4%)	
Modes of delivery			
Normal	104 (74.8%)	97 (69.8%)	0.643
Caesarean section	31 (22.3%)	37 (26.6%)	
Instrumental	4 (2.9%)	5 (3.6%)	
Complications of labor			
Perineal tear	36 (26.1%)	39 (27.8%)	0.946
PPH	59 (43.5%)	69 (50.0%)	

Variables	Teenage n=139	Adult n=139	p value
Retained placenta	13 (8.7%)	8 (5.6%)	
PROM	31 (21.7%)	23 (16.7%)	

Regarding the maternal health outcomes, prolonged labor was found to be more frequent in adult mothers than teenage, 5.8% of teenage and 9.4% of adult mothers had prolonged labor but statistically insignificant.Normal vaginal delivery was found to be the common mode of delivery in teenage mothers with lower rates of caesarean section. This is comparable to a study done by Gupta et al. which showed that teenage primigravida are more likely to have a spontaneous vaginal delivery without compromising the maternal or neonatal outcome.[13]Also our results are supported by a study by Derme et al. where teenage pregnant women had a higher proportion of spontaneous vaginal delivery.[17] Favorable outcome in teenagers was also found in the study done by Pun et al. normal deliveries being more common in teenage pregnancy than adult mothers .In the same study, they found the rate of cesarean delivery less in teenage pregnancy and rate of instrumental delivery was almost same, finding similar to our study.[19]

The complications of labor were found to be more prevalent among teenage when compared to adult mothers, though statistically insignificant, most common being PPH in both the groups.

However, the incidence of PPH was high among adult mothers than teenage. This is in line with the study by Bildircin et al. which also showed that incidence of PPH was higher in adults.[20] PROM was seen more frequently in teenage population. This finding is supported by a study done by Tripathi et al.where PROM was found in 10% of teenage mothers as compared to 4% in adults.[9] In our study 21.7% had PROM as compared to 16.7% in adult. Retained placenta was seen in 8.7% of teenage and 5.6% of adult mothers. Unlike other studies [21, 22] this study revealed no significant association between teenage pregnancies and preterm birth.

Although teenage mothers were found to have more preterm delivery than adults, it was not found to be statistically significant. This result is similar to a hospital based retrospective study done by Kayastha et al.[23] It, therefore, concluded that teenage pregnancy is not a public health problem if regular antenatal visit and hospital delivery is encouraged. In our study, no stillbirths and neonatal deaths were reported in both the groups. This is in contrast to a study done by Kumar et al where teenage pregnancy was associated with higher fetal and neonatal mortality.[24] Teenage mothers having babies with low Apgar score at 1 min was 14.4% as compared to 12.9% in adults. A study done by Bildircin et al. showed 5th minute Agar score in teenage mothers higher than adults.[20] It is important to notice the higher prevalence of LBW babies in teenage mothers compared to adult, 25% of teenage and 13.6% of adult mothers had given to low birth babies weighing less than 2500 grams. It was found that there is significant association between the age of the mother and weight of the babies(p=0.015).The prevalence of LBW babies in this study is 19.3% which is higher than the national prevalence of 12% .The incidence of LBW babies was significantly higher among adolescents in other studies as well [20, 25] Whether this reflects the deleterious socio demographic environment of most pregnant teenagers or whether biologic immaturity is also causally implicated is not known.[21]

The obstetric outcome of both the groups was almost similar in our study, only parameter that was significantly more in teenage was LBW babies. Teenage pregnancy may not be the only risk factor for adverse birth outcomes. The adverse outcomes could be attributed to their relatively disadvantaged socioeconomic background, quality of prenatal visits and their family support.[28] Another study

done by Kayastha et al concluded that teenage pregnancy itself is not a public health problem if regular antenatal visit and hospital delivery is encouraged.[23] From our findings we can also say that age only cannot be responsile for adverse pregnancy outcomes.There are certain factors mainly proper antenatal care which will determine the outcome.

Table 4: Neonatal health outcomes in the respondents

Variables	Teenage n=139	Adult n=139	p value
Gestational age at delivery			
Pre-term	17 (12.2%)	12 (8.6%)	0.327
Full-term	122 (87.8%)	127 (91.4%)	
Viability of newborn			
Alive	**139 (100%)**	**139 (100%)**	
Stillbirth	**0**	**0**	
Apgar score at 1 min			
<7/10	20 (14.4%)	18 (12.9%)	0.494
≥7/10	119 (85.6%)	121 (87.1%)	
Birth weight of babies			
Normal	104 (74.8%)	120 (86.3%)	**0.015**
LBW	35 (25.2%)	19 (13.7%)	
Early neonatal death			
No	139 (100%)	139 (100%)	
Yes	0	0	

The minimum adverse effects of adolescent pregnancy in this study may at least partly be from the availability of high quality of maternal care with implementation of safe delivery incentive program and free delivery charge and partly may be due to adequate number of antenatal visits by the teenage mothers.

However, this study also has certain limitations like it is a single centered study done within short period of time. It may be difficult to generalize the result to whole country as sample was not representative. Neonatal mortality within 24 hours only was considered in this study.

Table 5: Birth weight of babies among mothers

Variable		Teenage			Adult	
	Weight range in grams	Mean weight	SD	Weight range in grams	Mean weight	SD
Birth weight of baby	1800-4000	2807.8	470.54	1700-4000	2931.5	510.98

CONCLUSION

From this study it was found that the mean age at marriage and first pregnancy in teenage respondents is 17.25 and 17.73 years compared to 19.77 and 20.92 years in adults respectively. Preterm delivery, babies with low Apgar score and low birth weight were found more in teenage mothers, however only LBW was found to be statistically significant. There were no stillbirths and neonatal deaths. So we can say that adverse outcomes associated with teenage pregnancy can be reduced if we emphasize more on adequate antenatal visit, nutritional status of mother and good support system from family.

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Conflict of Interest: None

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Original Article

Pattern of Anterior Segment Eye Disorders and Refractive Errors in Type II Diabetic Patients in a Tertiary Eye Care Center

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Abstract

Introduction : Diabetes mellitus is one of the most common endocrine disorders that ophthalmologists encounter and this disease can affect any part of eye, which can significantly affect the vision. But most health care professionals are mainly concerned about posterior segment of the eye i.e. diabetic retinopathy. The aim of the study is to examine the anterior segment eye disorders and refractive errrors in patients with diabetes mellitus.

Methods: A prospective cross sectional study done in two hundred Type II diabetes mellitus patients in one year in Nepal eye hospital, Kathmandu, Nepal. All patients underwent subjective and objective refraction and comprehensive eye examination. The anterior segment of the eye was examined by using a bright pen torch and slit-lamp biomicroscope. Intraocular pressure was measured by Goldmann applanation tonometer. Fluorescein dye was used to stain the cornea and also in tonometry and 1% tropicamide was used to dilate the pupil. Grading of lens opacities was performed by using the Lens Opacities Classification System (LOCS III).

Results: Two hundred patients with diabetes mellitus were analyzed with male: female ratio of 1: 1.04. The commonest refractive error was myopia (29.5%). The most common findings in lids was xanthelasma (24%), in conjunctiva was pingecula (45.5%) and in cornea superficial punctate keratitis (22.5%). Dilatation of pupil was delayed in patients and cataract was found in 123 patients. Forty- six (23.0%) patients had raised IOP greater than 21 mmHg.

Conclusion: Periodic screening of anterior segment disease is important along with routine posterior segment examination for diabetic patients.

Keywords: Anterior segment disorders, Diabetes mellitus, Posterior segment

Introduction

Diabetes mellitus (DM) is a major systemic disease worldwide and its incidence has risen markedly in the past several decades. The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030.[1] DM has also been increasingly prevalent in Nepal due to rapid urban growth rate, dietary changes, reduction in physical activity and increasing incidence of obesity. Study done by M.D. Bhattarai in urban population in Nepal found the prevalence of diabetes among people aged 20 years and above to be 14.6% and

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the prevalence among people aged 40 years and above to be 19%.[2] DM can affect any part of the eye and eventually lead to blindness throughout the world. DM leads to complications such as neuropathy, retinopathy, nephropathy, and cardiovascular disorders, in which hyperglycemia plays a major role.[3] WHO estimates that Diabetic Retinopathy (DR) is responsible for 4.8% of the 37 million cases of blindness throughout the world.[4] Most studies have concentrated on diabetic retinopathy, but this disease can any part of eye and sometimes can significantly affect vision. Anterior segment complications associated with DM are not well recognized. Studies have reported two – thirds of patients of Diabetes mellitus to experience diabetic keratopathy which can potentially lead to blindness.[5] Anterior segment complications can significantly impact vision which underscores the importance of the underlying impact of DM on anterior segment disorders.

The aim of the study is to examine the anterior segment eye changes or disorders and refractive changes in patients with diabetes that can result in compromised visual function and reduce patient's quality of life.

Methods

This was prospective, observational cross sectional study done in two hundred patients of Type II Diabetes mellitus attending Nepal Eye Hospital for ocular examination or discovered to have diabetes mellitus during routine eye examination within a period of one year i.e. June 2017 to May 2018. The anterior segment of the eye was examined by the ophthalmologist using a bright pen torch and slit-lamp biomicroscope. Intraocular pressure was measured using Goldmann applanation tonometer. Proparacaine drops were used as topical anesthetic agent, fluorescein dye (nontoxic) was used to stain the cornea and also in tonometry, and 1% tropicamide was used to dilate the pupil. All subjects underwent comprehensive eye examination consisting of subjective and objective refraction, anterior segment eye examination. Visual acuity was determined using Snellen chart. Then the visual acuity was converted to log MAR equivalent. Refractive error was defined according to spherical equivalent (SE) refraction which was calculated as the spherical diopters plus one half of the cylindrical diopters. Myopia was defined as SE refraction $\leq$ -0.25 D. Hyperopia was defined as SE refraction $\geq$ +0.25 D. Emmetropia was defined as SE refraction between -0.25 D and +0.25 D. Grading of lens opacities was performed by using the Lens Opacities Classification System (LOCS III) which consists of six slit lamp images for grading nuclear color (NC) and nuclear opalescence (NO), five retroillumination images for grading cortical cataract (C), and five retroillumination images for grading posterior subcapsular (P) cataract.. Significant nuclear sclerosis was defined as nuclear opalescence of $\geq$NO2. Intraocular pressure (IOP) was measured using a Goldmann applanation tonometer, and IOP greater than 21 mmHg was considered elevated.

Results

The findings on two hundred patients with Type II diabetes mellitus were analyzed. Out of two hundred subjects ninety- eight patients were male and one hundred two patients were female with male: female ratio of 1: 1.04. The age and sex distribution is shown in Figure 1.

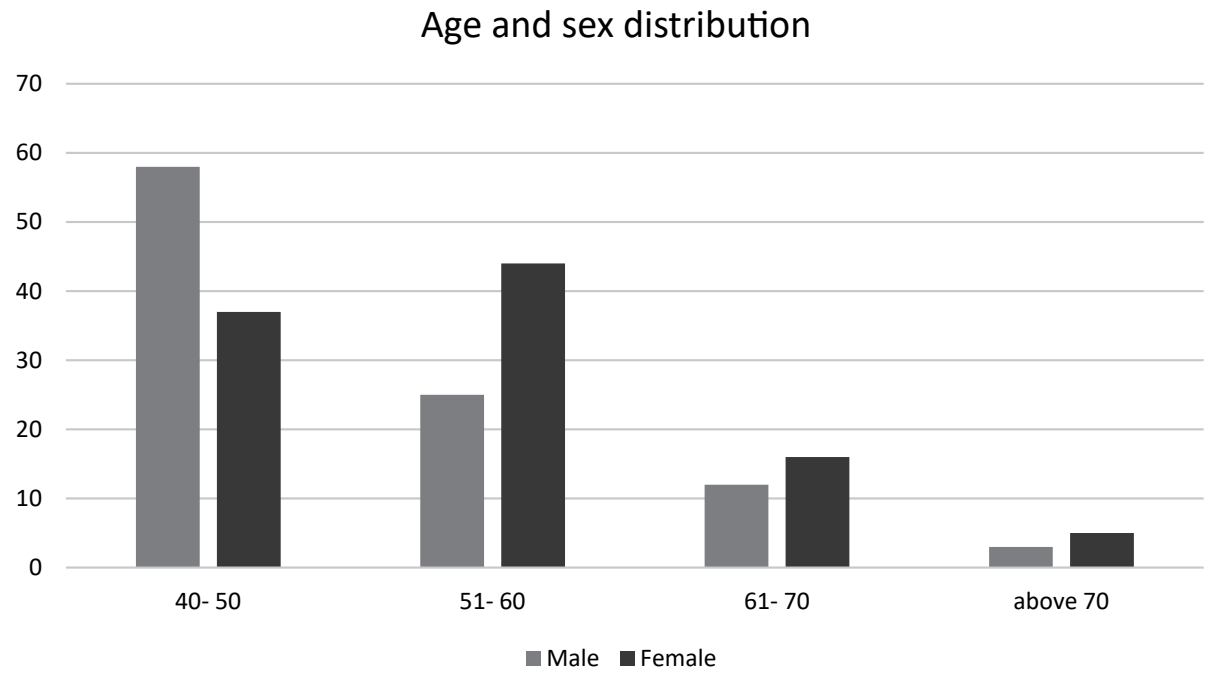

Figure 1: Age and sex distribution of Two hundred study population

The age of patients ranged between 40 years and 85 years with a mean age of 61.28 ± 8.35 years. Duration of diabetes mellitus was less than 5 years in 68 patients (34%), 104 patients (52%) had diabetes for 5- 10 years and remaining 28 patients (14%) had the disease for more than 10 years. The mean of disease duration was 9.31±4.15 years. The mean blood sugar was 127.44 mg/dl with standard deviation of 22.55.

The refractive status of diabetic patients are shown in Figure 2. Out of 200 study population 48 patients (24%) were emmetropic and rest of them were ammetropic which included 59 (29.5%) myopia, 47 (23.5%) hypermetropia and 46 (23%) astigmatism.

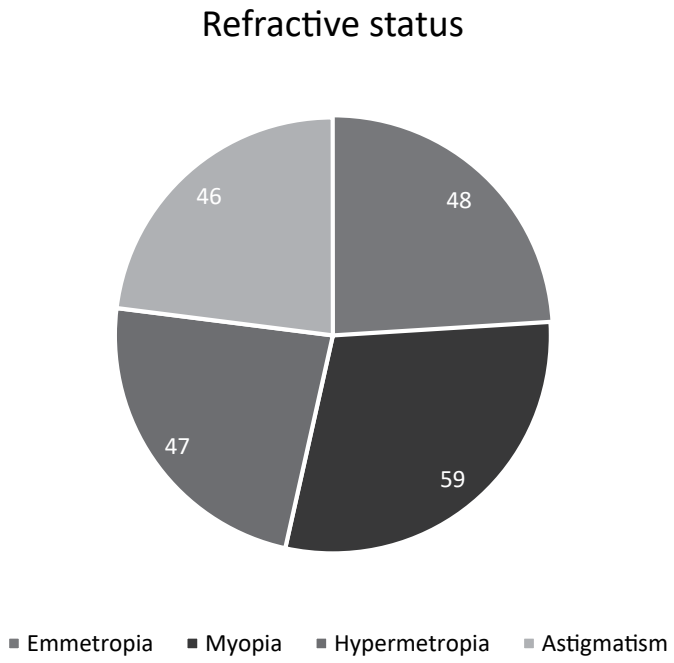

Figure 2. Percentage Distribution of Refractive errors among study population

Lids- As shown in Table 1, the findings in lids were xanthelasma in 48 (24%), poliosis in 45 (22.5%), stye in 40 (20%), warts in 37 (18.5%), chalazion in 33(16.5%), dermatochalasis in 31(15.5%) and ptosis in 11 (5.5%). The findings was more in group with duration of diabetes more than 5 years however it was not statistically significant.

Conjunctiva- Fifty five (27.5%), Ninety nine (45.5%) and Fifty six (28.0%) patients had pterygium, pingecula and tortuous conjunctival blood vessels respectively. Although it wasn't statistically significant, these findings were found to be higher in patients with diabetes for more than five years.

Table 1: Anterior segment findings in 200 diabetic patients

Findings	Duration of Diabetes		Total	Chi- square test
	<5 years	>5years	N (%)	P value
LIDS				
Warts	5	32	37 (18.5%)	0.25
Poliosis	17	28	45 (22.5%)	0.15
Chalazion	12	21	33 (16.5%)	0.86
Stye	10	30	40 (20%)	0.37
Dermatochalasis	11	20	31 (15.5%)	0.76
Ptosis	2	9	11 (5.5%)	0.11
Xanthelasma	23	25	48 (24%)	0.83
CONJUNCTIVA				
Pterygium	25	30	55 (27.5%)	0.21
Pingecula	21	78	99 (49.5%)	0.67
Tortuous blood vessels	15	41	56 (28.0%)	0.88
CORNEA				
Superficial punctate keratitis	17	28	45 (22.5 %)	0.82
Ulcer	6	19	25 (12.5%)	0.59
IRIS				
Iris atrophy	10	22	32 (16.0%)	0.94
Rubeosis iridis	1	9	10(5%)	0.10
Delay dilatation of pupil	20	33	53 (26.5%)	0.62
LENS				
Cataract	25	98	123 (61.5%)	0.88
IOP raised	6	40	46 (23.0%)	0.34

Cornea- In cornea examination forty five (22.5%) patients had superficial punctate keratitis and 25 (12.5%) patients had presented with corneal ulcer.

Iris and Lens- Iris findings were iris atrophy in 32 (16%) patients and rubeosis iridis in ten patients. Dilatation of pupil was delayed in 53 (26.5%) patients and cataract was found in 123 (61.5%) patients.

Intraocular pressure (IOP) - It ranged between 10mmHG and 45 mmHg with a mean of 18.36 mmHg with standard deviation of 6.75 mmHg. Forty- six (23.0%) patients had raised IOP greater than 21 mmHg.

DISCUSSION

Diabetes mellitus is the most common endocrine disorder ophthalmologists will encounter. Physicians are mainly concerned about the diabetic retinopathy among the diabetic patients. Diabetic

retinopathy is the 5th leading cause of blindness globally, and it is the leading cause of blindness in developed countries among working age adults.[6]

Several studies have concentrated mainly on vascular abnormalities of diabetic retinopathy, however almost all the layers of eye are affected including neuronal abonormalities.[7] This study provides an overview of the association between diabetes and pattern of anterior segment diseases.

Refractive error in the diabetic populations is considered as one of the main cause for visual impairment. Regarding the refractive changes associated with Diabetes mellitus Duke Elder has reported in his study that hyperglycemia leads to myopia, while hypoglycemia leads to development of hyperopia.[8] The study conducted by Shristi et al have noted a refractive error in 50.3% among diabetic population with hypermetropia (22.6%) being the most common type than myopia (12.6%) and astigmatism (15%)[9]. In this study we have found 24% were emmetropic and rest of them were ammetropic which included 29.5% myopia, 23.5% hypermetropia, 23% astigmatism but there was no significant correlation with blood sugar level. Diabetic patients are more susceptible to infection due to hyperglycemic condition which is the risk factor for recurrent stye and multiple chalazia.[10] In this study we noted the common findings in lids were xanthelasma (24%), poliosis in (22.5%), stye (20%), warts (18.5%), chalazion (16.5%), and dermatochalasis (15.5%) Study by Anas et al have found chronic blepharitis as the main lid findings and was strongly related to high presenting fasting blood sugar level.[11]

The most common findings in in conjunctiva was tortuous blood vessel (28%) and pingecula (49.5%) which was similar to Cheung et al study where they found a tortuous blood vessel i.e. significantly wider conjunctival vessel diameter which are easily isolated from the surrounding conjunctiva more in type 2 diabetic patients than in nondiabetic ($P< 0.01$).[12] Studies has shown that the most recognized corneal complications in diabetes is diabetic keratopathy which includes impairments of the epithelial basement membrane (BM), epithelial wound healing, epithelial–stromal interactions, endothelial function, and corneal nerve functions.[13] Several literatures including the study by Touzean et.al have found reduction in corneal sensitivity as the most common features in DM.[14] In our study corneal sensitivity was not measured, which is one of the limitation to the study. Iris atrophy was the most common findings which may be due to ageing process.

The pupils of diabetic patients are difficult to dilate and in our study 26.5% cases had delayed dilatation of pupil that is similar to other studies.[13] One hundred and twenty three (61.5%) cases had cataract, which was one of the most common findings and was higher in cases with duration of diabetes more than 5yrs however it wasn't statistically significant. In a Southern India study also showed 53% patients had cataract in one or both eye which may due to age related changes in eye.[15] The study shows Intraocular pressure was higher than 21mmHg in 23% cases, which is comparatively higher than other studies.[16]

Conclusion

Diabetes mellitus has adverse impact on anterior segment of eye also as it has its impact in retina causing the leading cause of blindness. Physicians attending the diabetic patients for ocular examination should be well aware of anterior segment diseases also, which will help in early referral and prevention of sight threatening complications.

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Rethinking the Continuum of Care for Seamless Transition of Stroke in Developing Countries: A Literature Review

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Abstract:

Introduction: Stroke is a time sensitive medical emergency, occurs suddenly and impacts deeply in a person's life. The prevalance of stroke is dramatically increasing globally which forecasts substantial socioeconomic burden. A continuum of stroke care is needed for reducing its burden. This study is aim to navigate the continuum of stroke care.

Methods: This article based on literature review.

Results: The continuum of stroke care is basically classified into four main phases with specific time of transiton based on the patients needs and specific treatment. They are acute, sub-acute, post-acute and long-term care phase. Each patients moves through each phase of stroke after disease onset. The important time for transition of acute phase is first 3 hours to 3 days after onset of disease, followed by sub-acute phase until first three weeks; post-acute phase is continued until 3 months and finally the long-term phase is the time started from three month to three years and beyound after disease onset.

Conclusion: Stroke care continuum is very important for providing seamless transition of the stroke patients from one phase of care to another which in turn helps to adjustment of stroke life, improves the quality of care and decrease the burden of stroke.

Keywords. Phases of stroke, stroke care continuum, stroke management, stroke transition of care.

Introduction

Stroke, a common and complex neurovascular disease, is a leading cause of death and disability globally with poor prognosis particularly in developing countries [1, 2] It is the emerging problem and third leading cause of death in Nepal.[3] In Tribhuvan University Teaching hospital, stroke is the most prevalent neurological disorders accounts around 50% of total admitted cases in neurology. [4] Among them, around 20% patients died and 80% were functionally dependent within month after stroke onset.[5] Moreover, caregiver burden was found to be significantly high among stroke caregivers in sub-acute stage of stroke in Nepal.[6] Though, stroke is an acute event of sudden onset, its is a complex disease with enduring sequelae in long term. Initially, it is treated as a medical emergency with the goal of care to focus on improving function and secondary prevention of complications. However, the needs and expectations of the patients and caregivers are being changed overtime and each phase of stroke such as acute, sub-acute, post acute and long terms. Therefore, comprehensive stroke management is necessary in each phases of stroke. However, stroke management is limited within hospital and focused on acute care particularly in developing countries.[3] The study aims to identify the phases of stroke care continuum with

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important of specific treatment and management in each phases of stroke.

Methods

The study is based on literature review. The supporting articles were searched using terms stroke continuum of care, phases of stroke, stroke management, pathways of stroke care, rehabilitation and recovery from various electrical journal and books that were published in different time.

Results and Discussion

The result is based on literature review and presented in terms of overview of stroke and phases of stroke and its treatment and management.

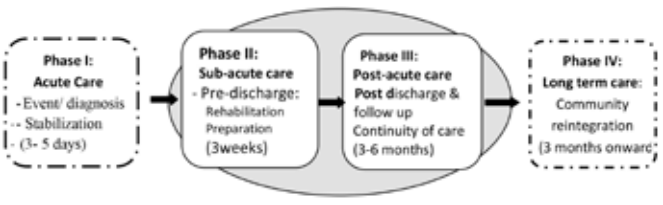
Overview of stroke

World Health Organization (WHO) has given the definition of stroke as "rapidly developing clinical sings of focal or global disturbances of cerebral function, lasting more than 24 hours or leading to death with appearance of vascular origin".[7] According to American Heart Association (AHA) as "stroke is a common neurovascular disease characterized as neurological dysfunctions attributed to an acute focal injury of the central nervous system infarction, ischemic stroke, intra-cerebral and sub-arachnoid hemorrhage diagnosed by overt clinical sign and symptoms, radiographic imaging, serum biomarkers and neuropathology.[2] Simply, it is an interruption of blood supply to the brain caused by a blockage of blood flow to an area of the brain due to either blockage of blood vessels that supply the brain or bleeding from blood vessels in the brain.

Regarding the nature of the disease, stroke occurs suddenly as a tragedy and brings long term effects in a person's life. After affliction of stroke, brain cell dysfunction occurs very rapidly within seconds of the onset of the ischemia and permanent neuronal death occurs within 6-8 minutes.[8,9] Therefore, most of patients experience of sudden onset warning sign of stroke FAST which stands for F: Face drop, A: arm unable to rise S: speech unable to talk or slurred speech T: timing of emergency calling. In addition, stroke patients also experienced loss of functional ability along with psychological, emotional and spiritual distress which impacted grately in a person's welbeing and quality of life. However, the needs and expectation of the patients and caregivers are vary in each phase of stroke. Therefore, seamless transition with timely and proper management in each phase of stroke care continuum is equally important for continuity of care and ultimately improving the outcomes of stroke patients.[10]

Phases of Stroke in continuum of care

Based on stroke management frameworks in the searched literature, continuum of stroke care is categorized in to various phases with specific point of transition where the patients and caregivers transit through one phase to another. A number of literature suggested that stroke patients need continuum of care for better recovery specially which started from onset of stroke, acute care; rehabilitation and long term care.[11,12] Likewise. phases of stroke care was also described Organization's "Stroke Services Framework" by World Stroke and Cameron and Gignac's "Timing It Right" framework.[11,13] Those phases in the stroke contimum of care summaried and described with four different phases in a sequential order from acute care, sub-acute, post-acute then long term care with specific timeframe after afflicted from disease. Figure 2 below illustrates the each phases. The sub-acute and post-acute phases are described as following



The first phase (phase I) of stroke is started once patients had a stroke and ended after medically stable which takes around 3 days after disease onset. In this phase, first 3 hours is called **golden hours** for stroke management because fatal and permanent effects caused by stroke can be avoided and makes the

prognosis better if the patient arrieved hospital within three hours and gets medical services quickly and exactly within 5 hours after disease onset.[11] Similarly, the first three days are very crusial for stroke survivor because each stroke patients are in critical stage and level of consciousness may be decreased until 72 hours i.e 3 days after onset of disease due to changes of brain physiology.[9] Therefore, all stroke patients should be admitted in the hospital for at least three days.[11] In addition, the treatment of the acute-phase of stroke in the hospital has three main three main stands 1) general therapy 2) specific therapy 3) treatment of complications which may either be neurological or medical.

Firstly, general management focus to support optimum physiological conditions and maintain vital functions in critical time which comprises respiratory and cardiac care, fluid and metabolic management, blood pressure and body temperature control, and management of increased intracranial pressure and glucose metabolism. In addition, treatment of seizure, prevention of deep vein thrombosis, pulmonary embolism, aspirated pneumonia, other infection and decubitus ulcers are parts of general treatment. Secondly, specific management or medical therapy as well as surgical management are included and provided as necessary based on the types of stroke and needs of the patients. Varies medications can be used in this phase to support the patients physiological condition and their comorbid conditions such as anticoagulation such as heparin and warfarin and tissue plasminogen activator for ischemic stroke anti antihypertensive drugs and other drugs can be prescribed as needed. Thirdly, prevention and treatment of complications: Administration of heparin or low molecular weight heparin for prevention of deep vein thrombosis & pulmonary embolism, prophylactic antibiotics for prevention of infection, nasogastric tube for prevention of aspirated pneumonia, care of Foley's catheterization for incontinence and prophylactic anticonvulsant to prevent seizure are recommended. In addition, treatment and management of elevated intracranial pressure and body temperature are also managed by osmotherapy and surgical decompression because ischemic brain edema occurs during the first 24-48 hours after ischemic infarcts and patient's level of consciousness may be declined until 72 hours i.e 3 days after onset of symptoms. In this phase, stroke patients and caregivers are totally dependent with health care providers for obtaining the basic needs and activities of daily livings of the patients and necessary informations.[14]

Phase II: Sub-acute phase. This phase of care is basically called phase of rehabilitation and preparation for transition to home from hospital among. The main focus of care in this phase is recovery process by preparing patients and caregivers to gain much capacity and strength to be able to cope the stroke crisis and able to adjust at home after discharge. Similarly, intensive therapies are implemented for rehabilitation such as physiotherapy, occupational therapy, speech therapy, psychological and spiritual therapy for enhancing the recovery process by multidisciplinary stroke team. Beside those therapies, the patients and caregivers need information education and training support regarding nature of stroke, types, symptoms its consequences, secondary complications and medicine reconciliation as well as care process and safety at home.[15]

Phase III: Post-acute Phase. This is the discharged phase which remains until three month after onset of disease. This phase is very important for getting maximum functional recovery of stroke patients. In otherhand, it is evident that every stroke patients spent around 75-90% of his/her time in bed inactively in early stage regardless of their severity. However, each stroke patients are at risk of developing the secondary complications due to physical inactivity and disease physiology. The risk of getting secondary complications also increased after discharged because 1) they are shifted from highly sophisticated care setting hospital to normal life at home, 2) drastically reduction in intensive of therapies and 3) care responsibilities totally shifted to family caregivers and patients from health care providers. In addition, family caregivers are more emotionally anxious and

worry about uncertainty, fear and crisis.[14, 17, 18] These problems associated with delay in recovery, poor outcomes, increased the time of hospitalization and mortality as well as increased of re-stroke and rate of readmission of the stroke patients.[19, 20, 21] Likewise, it often increased the dependency and burden on caregivers.[22]

Phase IV: Long Term Care. It is also called phase of re-adjustment at home because stroke is not only an acute condition, but also a lifestyle disease.[13] Similarly, there is higher changes of re-stroke and long term adjustment problems. Therefore patients need to change or modified their life style for long term for maintaining health and wellbeing. The health promotion programs should be lunched on the basis of home or in the community setting so that they are able to adjust with new life after stroke. The continuity of stroke care after discharged can maintain through home visit , telephone call by health care providers as well as hospital/clinic visit by the patients with thehelp of family caregivers. So that patients and family caregivers felt seamless continuity of care. Health care providers can bridge the care gap between patients/family and health care providers in order to get seamless transition through continuity of care at their homes.[23]

The continuum of stroke care is a continuous process that starts at the time the patient first presents with impairments and may need to be provided throughout the rest of his/her life time.[24, 25] Based on the continuum of stroke care, most of the developed countries developed the organized stroke care system in national level. The organized stroke care contributes to improve the stroke care delivery system consequently the problems related to stroke are declining in trend in developed countries. In contrast, stroke incidence, mortality and disability are contineously increasing in developing countries. However, The stroke management is basically focused on acute care and hospital setting where continuum of care is lacking in developing countries. It is imperative that despite the limitations of resources in developing countries, appropriate efforts should be implemented to improve services for stroke survivors. Thus, stroke care continum need to be adopted for improvement of stroke care quality umtimately improve the quality of life and wellbeing of the patients and family caregivers.

Conclusions

Stroke is a time sensitive medical emergency and a life style disease. Changing life style is most important for early prevention and readjustment of life after stroke event. Providing care on the basis of care continuum is crucial for prevention and management of stroke which ultimately reduced the burden of stroke. Based on continuum of care, most of the advanced countries developed the organized stroke care system in national level. The organized system of stroke care contributes to improve the stroke care delivery system consequently the problems related to stroke are declining in trend in related countries. In contrast, stroke burden is continuously increasing in trend in low and medium income countries. Therefore, this is the right time for rethinking the continuum of stroke care for seamless transition of stroke patients from acute stage of disease to adnjustment of life having stroke for enhancing the quality of life and welbeing of the patients particularly in developing countries.

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Post Graduate Surgery Education : A Review based on General Surgery Residency Program at National Academy of Medical Sciences

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Abstract:

In Nepal, until two decades ago, surgical specialists were much less and were not available in majority of hospitals. This review has highlighted the status of surgical education in Nepal, its strengths, and its challenges based on NAMS general surgery residency program model. The paramount challenge is that the surgery education programs need to produce surgeons, who are able to establish a delivery system of surgical service even with the meager resources available, in addition to being a safe surgeon with competent skills and at the same time, keep up with the growing pace of sophisticated and technically demanding international surgical practice. In order to narrow the gap in access to surgical care in low income countries, the recommendation is that the individuals and organizations must work collectively together, professionally and globally

Key words: *General Surgery, National Academy of Medical Sciences, Post-graduate Residency Program, Surgical Care,*

Introduction

Nepal, with its population of about 29 million people, is a low income country in South Asia with a GDP(current US$) of 21.13 billion.[1] As per the Lancet Commission on Global Surgery, South Asia ranks the highest among the global regions with an unmet need for surgical care with an estimated annual surgical unmet need of about 57.79 million surgical cases.[2] In Nepal, until two decades ago, surgical specialists were much less and were not available in the majority of hospitals.[3] The primary reason was that there were few institutions providing post graduate surgical education.

At present, there are 7 post graduate, general surgery training program in Nepal, including National Academy of Medical Sciences (NAMS), Tribhuvan University Teaching Hospital (TUTH) and affiliated colleges, Kathmandu University (KU) and affiliated colleges, Patan Academy of Health Sciences (PAHS), BP Koirala Institute of Health Sciences(BPKIHS) and Pokhara Academy of Health Sciences. Each of the universities/academias has its own general surgery training curriculum. The entry and exit criteria for the surgery residency program were also different for each university/academy prior to the establishment of Medical Education Commission .

In Nepal, historically Bir hospital was the first center approved for Fellow of Royal College of Surgeons training program since 1987.[4] Post graduate education started in Bir Hospital with the support of Tribhuvan University under the Post Graduate Medical Education Coordination

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Committee (PGMECC) from 1994.[4] In 2002, Bir Hospital was developed into National Academy of Medical Sciences (NAMS) with the intention of producing specialized health professionals.[4] The FRCS-approved program at Bir Hospital was discontinued when the National Academy of Medical Sciences started its General Surgery Residency Program. This report assesses the current status of general surgery education in Nepal based on the model of a general surgery residency program at National Academy of Medical Sciences.

Surgery training program in Bir Hospital, NAMS

Bir Hospital is the current post graduate general surgery training centre for the National Academy of Medical Sciences(NAMS). The goal of the post graduate training program at NAMS is to produce clinically competent, compassionate, and academically sound specialists.[3] The general surgery curriculum at NAMS is a competency-based program and encourages independent, self-directed, and problem-based learning. This model of post graduate education is recommended as a "requirement of a post graduate curriculum" by the Nepal Medical Council.[5] The NAMS model of surgery education has a striking difference with other international models of surgical education. For instance, in the US, with the change in American medical education system, the Halstedian training model of "see one, do one, teach one" that governed surgery training for almost 100 years has been replaced by the achievement of the ACGME competencies, milestones, entrustable professional activities, and acquisition of surgical skills outside the operating room on simulators.[6] In NAMS surgical residency model, the Halstedian model of residency "See one, do one, teach one" is still being followed as a type of apprenticeship model, but with the modification of "See many, do many, teach many" as has been advocated for training surgery residents.

NAMS has produced surgeons who have formed a potent surgical work force for the country, although, a deficiency of surgeons still exists. From 2006 to 2017, considering the year of graduation, out of a total 767 post graduates from National Academy of Medical Sciences, 89(11%) have graduated as general surgeons. Prior to the postgraduate entrance taken by the Medical Education Commission, the entry criteria consisted of a competitive entrance examination where medical graduates who have completed a MBBS (Bachelor of Medicine and Bachelor of Surgery) degree with one year of a rotating internship accredited by the Nepal Medical Council were eligible to apply. The candidates working for the Ministry of Health should have minimum of two years of work experience in the medical field as a medical officer, with at least a year in an extremely remote region or two years in a remote region of the country, to be eligible to apply under the government quota. The other candidates should have a minimum of one year of work experience as a medical officer after temporary registration with the Nepal Medical Council. The candidates were selected on the basis of merit according to an entrance examination involving multiple choice questions. Candidates working for Nepal Government, Ministry of Health, had priority with additional marks obtained if they had worked in remote areas for selection. Currently, the Medical Education Commission has taken over this role of selection and entry into post Graduate programme by conducting common entrance .

After the enrollment into a three year general surgery residency program, the residents rotate through different affiliated hospitals during their three years of training as a part of clinical rotation.

The surgery residents rotate in general surgery for 18 months and the surgical sub-specialties for the other 18 months during the 3 year residency. During Post graduate year 1(PGY1), the surgery residents are assigned to a general surgery unit. During PGY2, and the initial six months of PGY3, rotations occur in gastrointestinal surgery, neurosurgery, paediatric surgery, urology, plastic surgery and orthopaedics. In addition, the residents also rotate in a periphery

hospital so that they get a holistic understanding of surgical services in Nepal. During the later six months of PGY 3, the residents are rotated again to general surgery. The general surgery residents are trained under the guidance of the designated faculties in surgical case management with strictly supervised, operative hands-on opportunities to develop their surgical skills.

The core academic schedule for the surgery residents is comprised of surgical case presentations, journal clubs, surgical audits, inter-department interactions like surgery-radiology, surgery-oncology and surgery-pathology, and various related seminars. The surgery residents are actively encouraged to participate in clinical meetings of the Society of Surgeons of Nepal (SSN) to enhance their networking skills. The SSN clinical meetings are organized every month in different hospitals in Kathmandu.

In addition to the clinical training in surgical case management and surgical procedures in the outpatient departments, surgical wards, and operation theatre, the residents are also exposed to conducting and writing thesis. The topic of thesis is chosen in the first six months of the start of residency. The thesis proposal needs to be approved by Institutional Review Board by the 9th month of first year. A faculty member, either a Professor or an Associate Professor, will be designated as the preceptor for each surgery resident by the Coordinator of MS Surgery Program. The residents search national and international surgery journals and prepare a list of topics of their thesis which will be finalized by the preceptor. The surgical trainee should complete the thesis work and submit the final report by the end of 30 months of their 3 year residency. The thesis work provides the surgical trainee with ample opportunity to gain further experience and understanding about their research proposal, research methodology, data analysis, and preparation of the thesis report.[7]

During the surgery residency, the surgery trainees are included in five mandatory training programs–Basic Surgical Skills, Trauma Life Support, Research Methodology, Advanced Cardiac Life Support, and Medical Education. The Basic Surgical Skills training is conducted during the initial six months of their residency which helps them to learn standard techniques from the start of their training. During the previous programs of training of the surgery residents, many experts noted that it was easy to learn an incorrect technique and was thereafter, extremely difficult to unlearn this incorrect technique. The concept of providing a course in Basic Surgical Skills is to assure that the residents learn correct basic surgical skills.

The exit criteria consists of a formative evaluation, thesis, and a summative evaluation[8] The formative evaluation is done by the chief surgeon of the unit where the resident rotates. The thesis is evaluated during the final examination. The summative evaluation is carried out by an assessment of surgery knowledge, which includes multiple choice questions and short answer questions along with practical examination. The examination of surgery knowledge includes applied basic science, principles and practice of surgery, and recent advances in surgery. The practical examination is administered by faculty surgeons from within the NAMS and two faculty surgeons who are invited from other universities as external examiners. The practical examination includes clinical case presentation and approach to management, an Objective Structured Clinical Examination (OSCE), and Viva voce[8] Surgery residents who successfully complete the examinations will be awarded the degree of Master of Surgery (MS) in General Surgery.

Surgery graduates then must pass the General Surgery specialist examination conducted by Nepal Medical Council after which the candidate will be registered and certified as a general surgeon and can start clinical practice as a General Surgeon.

Strength of general surgery training program

With the start of these general surgery training

programs over last two decades, the medical graduates have got the opportunity to obtain a formal, curriculum-oriented education and training in general surgery in Nepal. One of the overarching benefits of this approach is that the surgery residents get to manage the type of cases which they are going to see in their future surgical practice. In addition, the surgery residency program has improved the quality of delivery of surgical services in the hospital and increased the number and quality of research at the academic institutions.

The training program requires the surgery trainees to complete a mandatory thesis during three year residency. The trainees are provided with basic training in Research Methodology so as to prepare them with the basics of conducting research. This additional focus helps surgery graduates to start their research projects once they are into their surgical practice.

As the surgery residents rotate through the peripheral hospitals as a part of their training, they see and take care of the cases that are not often referred to the central hospitals. This practice also fulfills the recommendations by the Nepal Medical Council to rotate the residents to peripheral health facilities[5] and to see diseases not common in the urban areas.

A study done among medical students and undergraduate interns in six medical colleges of Nepal showed that 25% chose "general surgery" as the preferred specialty of choice at the start of medical school which decreased somewhat to 22.7% during the course of their medical school training.[9] This decrease in interest among the young doctors regarding "surgery as a career choice" also needs to be addressed by the surgical education system. Since there is a shortage of surgeons in the district hospitals in Nepal increase in number of surgery training programs will be able to tackle the shortage of surgeons needed.

Challenges ahead in general surgery training

With the emerging need for better quality surgical care in peripheral hospitals of Nepal, there is a growing demand for general surgeons. The greatest challenge will be for the new surgery graduates who will have to use their knowledge and skills to start and establish surgical service centers in different hospitals of the country. This situation requires that the surgical education needs to be extremely competitive and rigorous; in addition, the surgery training program must be methodical and need-based. A systematic assessment of the efficacy of the surgery training program in terms of number of surgical graduates and the quality of the surgical training will help to guide and direct the course of surgical education program.

With the change in the governance system to that of a three tier - at the local, provincial, and federal level, there will be the establishment of new hospitals and extension of established hospitals in the country. Consequently, there will need to be an increase in the number of post graduate general surgery training institutions. The need and challenge in the future will be the balance between the number of surgery graduates and the quality of their training versus the trainers, i.e. the trained and competent surgical faculties. This calls for a strong need of education programs to teach surgical educators.

There is still need of general surgeons in Nepal, but there is also an increasing trend of general surgeons opting for surgical sub-specialty training programs. Although there are efforts to increase the number of training institutes, the vision would not be fulfilled until and unless good quality and safe surgeons are produced for the community.

The other challenge faced in surgical education is deficiency of national curriculum for all general surgery training programs. Consequently, each university has its own curriculum and own criteria for the exit examination for surgery trainees. There are only few regulatory mechanisms to standardize the quality of surgery training across Nepal; for instance, every surgery graduate has to take the

Nepal Medical Council(NMC) specialty licensure examination before starting surgical practice as a general surgeon which certifies the final competence and provides the approval to start clinical practice as a general surgeon.

Discussion

This review has highlighted the status of surgical education, its strengths, and challenges based on NAMS general surgery residency program model. There are differences in the structure of surgery training programs in different countries, and there are challenges faced by each surgical education system in high income or low income countries.[10] In district hospitals of Nepal, patients with an acute abdomen and peritonitis who need emergency surgical management are referred to tertiary hospital, but even routine procedures like appendectomy, circumcision, and inguinal hernia repair are exceedingly rare.[11] Thus, the paramount challenge is to narrow the gap in access to surgical care in low income countries, it is recommended that the individuals and organizations must work collectively together, professionally and globally.[12] The same "rule of thumb" applies to surgery education in the countries of this region. On one hand, there is need of a standardized national education system in surgery, whereas on the other hand, only after ensuring collaborative opportunities for skills transfer from established state-of-the-art national and international surgical centers. Providing opportunity for training to surgical faculties and educators, will further ensure the improvement in the quality of the surgical education .

Conclusion

Surgery education programs need to produce surgeons, who are able to establish a delivery system of surgical service even with the meager resources available, in addition to being a safe surgeon with competent skills and at the same time, keep up with the growing pace of sophisticated and technically demanding international surgical practice such as minimal invasive surgery and robotic surgery. Thus after ensuring the delivery of basic surgical service, next step would be to acquire the latest techniques, simulators and equipments to include in surgical education programs.

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Metaplastic Breast Carcinoma Presenting As A Giant Phyllodes Tumor

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Abstract

Metaplastic breast cancer (MBC) is a rare malignancy characterized by the microscopic presence of two or more cellular types with variety of presentation from fibroadenoma, phyllodes tumor to malignant tumor. We report a case of metaplastic breast cancer presenting as a giant phyllodes tumor.

Keywords : *Breast, Cancer, Metaplastic,*

Introduction

Phyllodes tumor are fast growing breast tumor with a wide spectrum of behavior from benign to malignant. Metaplastic breast cancer (MBC) is a rare malignancy characterized by the histologic presence of two or more cellular types, commonly a mixture of epithelial and mesenchymal components.[1] Metaplastic breast cancer represents 0.25–1% of breast cancers diagnosed annually.[2] We report a case of metaplastic breast cancer presenting as a giant phyllodes tumor.

Case Report

80-year-old lady from Kathmandu presented with enlargement of left breast which progressively increased in size over 2 years. The examination showed a giant enlargement of left breast which measured 18 cm craniocaudally and 22 cm in tranverse dimension with nipple areola complex displaced caudally-laterally and stretching of the overlying skin (Figure 1). The right breast appeared normal and there were no palpable axillary or clavicular lymph nodes. The fine needle aspiration cytology showed " spindle shaped cells in clusters with mild pleomorphism" suggestive of phyllodes tumor.

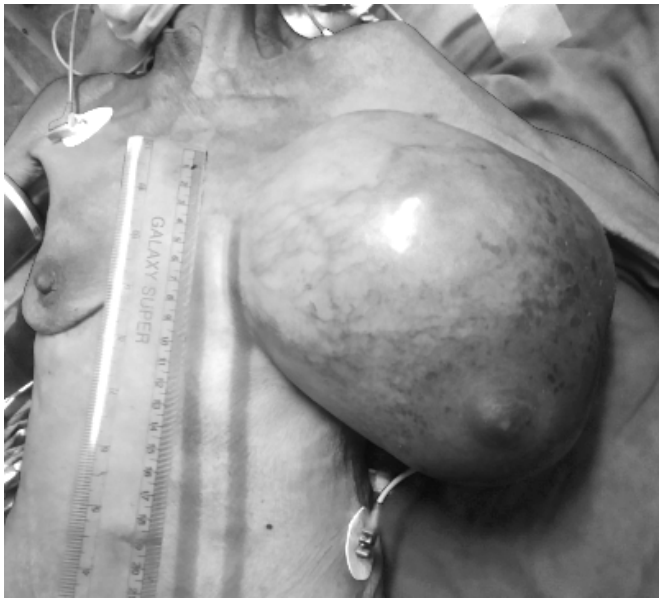

Figure 1. Left breast phyllodes tumor

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The simple total mastectomy was performed and a vaccum drain was placed. The lateral areas were apposed with the superior and inferior skin flaps and there was a defect of 10cm X 5cm in the middle area over left pectoralis major muscle which was reconstructed with full thickness skin graft from left leg. The patient develop SSI over lateral aspect of graft which was managed with antibiotics.

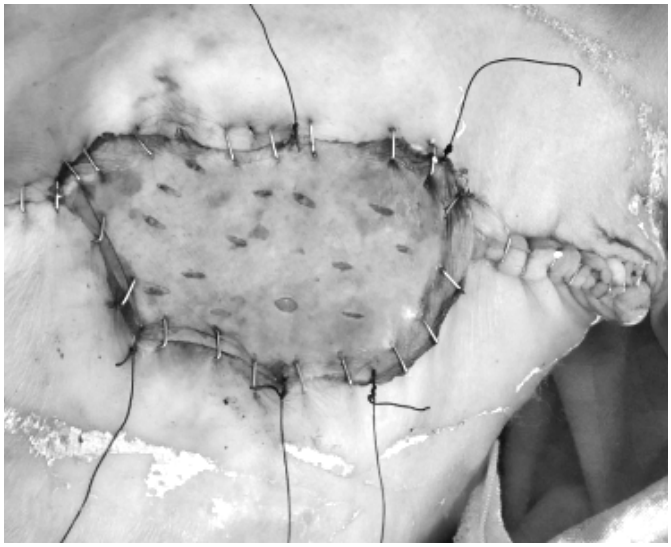

Figure 2. Post mastectomy Day 5

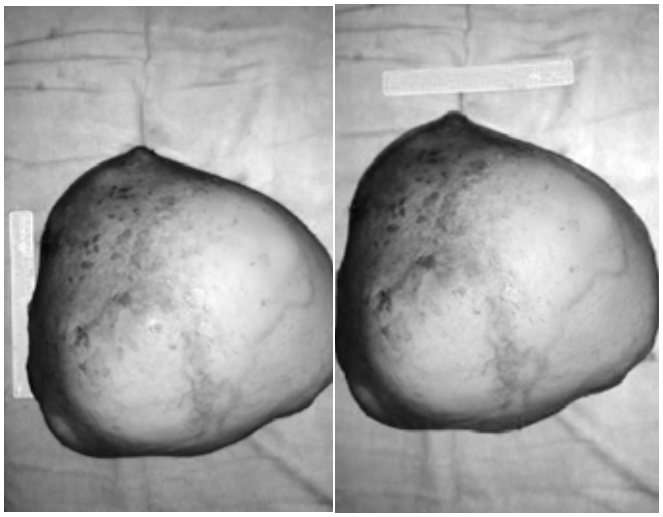

Figure 3. Macroscopic specimen

The microscopic examination showed biphasic pattern consisting of infiltrating carcinoma with mesenchymal components and all the margins free of tumor with histological diagnosis of mixed type metaplastic carcinoma.

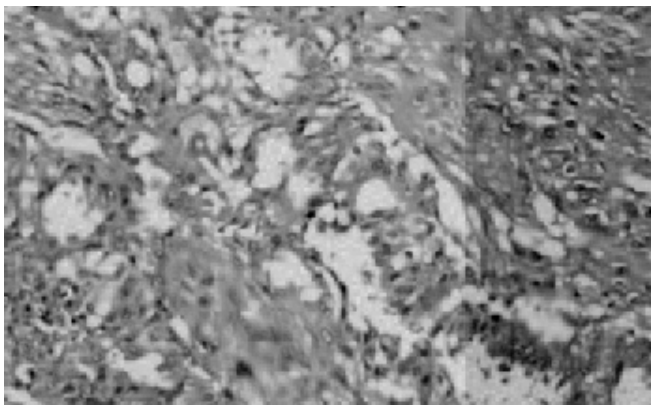

Figure 4. (H&E 40X) shows atypical glands infiltrating the stroma. These glands are lined by atypical cells having moderate pleomorphism with round to oval nuclei and coarse chromatin.

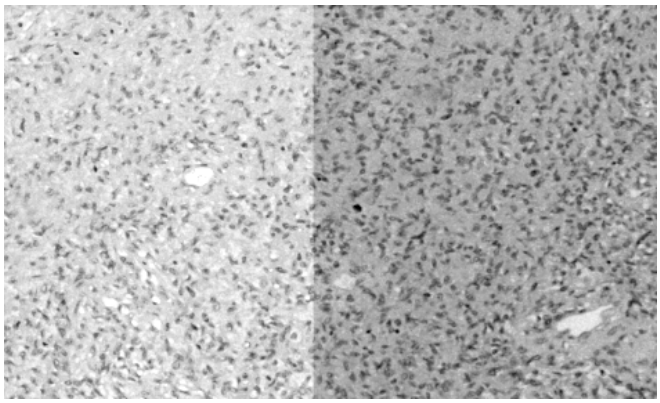

Figure 5. (H&E 40X) shows spindle cells arranged in fascicles which are moderately pleomorphic and have elongated nuclei with coarse chromatin. Mitotic figures are also noted.

Discussion

The phyllodes tumor demonstrates wide biological behavior: from benign similar to fibroadenomas to borderline with local recurrence risks and malignant with metastatic potential.[3] Schillebeeckx et al from Belgium have reported a similar case of giant phyllodes tumor with heterologous, sarcomatoid foci, which consist of a myxoïd liposarcoma along with additional foci of ductal carcinoma in situ of the breast (DCIS).[4] The case was treated with simple mastectomy followed by adjuvant radiotherapy (50 Gray in 25 fractions) and tamoxifen for DCIS .Seven month follow up showed no recurrence.

The surgical treatment for phyllodes tumor is wide excision with intention of surgical margins of minimal 1 cm as tumor free surgical margin is essential to prevent recurrence. If the surgical margin can be achieved, either lumpectomy or partial mastectomy should be done otherwise a total mastectomy is indicated . As phyllodes tumor has hematogenous spread and rarely spread to the lymph nodes, routine lymphadenectomy is not indicated. There was no difference in overall or disease-free survival whether metaplastic breast cancer patients were treated with mastectomy or lumpectomy[5] or either modified radical mastectomy or breast conservation therapy.[6] Acar T et al from Turkey have concluded that more aggressive treatments should be used for metaplastic breast cancer but do not advise routine axillary dissection because of lower axillary metastasis.[7] Another case series from Istanbul by Eren Boler D et al have concluded that the metastatic breast cancer rarely metastasize to axillary lymph nodes despite large size and are usually triple negative with high Ki-67 scores indicating aggressiveness and lack of response to hormonal therapy.[8] The outcome of metaplastic breast cancer is worse than for other breast cancer subtypes[9] and five-year progression free and overall survival reported from Pakistan were 79.5% and 76.3%.[10]

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स्तरीय शिक्षा र स्वास्थ्य सेवा : सबै नेपालीले पाउने कहिले?

✍ हरिप्रसाद लम्साल

सहसचिव, शिक्षा, विज्ञान तथा प्रविधि मन्त्रालय

कार्यकारी सारांश

संविधानत: शिक्षा र स्वास्थ्य सेवा नागरिकका मौलिक हकका विषय हुन् । संविधान र अन्तर्राष्ट्रिय प्रतिवद्धताबमोजिम शिक्षा र स्वास्थ्य सेवालाई सहज र सर्वसुलभ बनाउनै पर्ने अवस्था छ । यतिबेला सरकारको प्रयास पनि यी सेवालाई सार्वजनिक स्वरूपको बनाउनेतर्फ केन्द्रित हुनुपर्ने देखिन्छ । यस्तो प्रयासको गति क्रमश: बढ्नु पर्ने हो किनकि निश्चित समयमा मुलुकले यी सेवालाई पूर्ण सार्वजनिक स्वरूपको बनाउनुपर्छ । तर मुलुकको शिक्षा र स्वास्थ्यमा निजीकरण हुने क्रममा कमी आएको छैन । अझ यसको दायरा बढ्दै गएको देखिन्छ । यसले गन्तव्य अलमलमा रहेको इङ्गित गर्छ किनकि सार्वजनिक स्वरूपको बनाउने कार्य र निजीकरण गर्ने काम एकै पटक हुन सक्दैनन् ।

मुलुकका सबै नागरिकले सुलभ र स्तरीय शिक्षा र स्वास्थ्य सेवा कहिले पाउलान् ? अर्थात् उक्त दिन कति टाढा होला ? नागरिकको पहुँचभित्र स्तरीय स्वास्थ्य सेवा कहिलेसम्ममा पुग्ला ? सबै बालबालिकाले समन्यायिक ढङ्गबाट गुणस्तरीय शिक्षा पाउने दिन कहिले आउला ? शिक्षा स्वास्थ्य बाहेकका आधारभूत सेवाको सुनिश्चितता नागरिकलाई कहिलेसम्म होला ? यी र यस्तै प्रश्नहरू अहिलेका मूल प्रश्नहरू हुन्, जसको उत्तर खोजी गर्नु आवश्यक मात्र नभएर अनिवार्य नै भइसकेको छ ।

प्रस्तुत लेख यिनै विषयवस्तुलाई ध्यानमा राखेर विद्यमान समस्या केलाई अबको बाटो तय गर्नमा केन्द्रित गरिएको छ । मूलत: विभिन्न दस्तावेज र अध्ययन अनुसन्धानका प्राप्तिमा आधारित भई तयार गरिएको यस लेख आफैमा वर्णनात्मक र विश्लेषणात्मक बन्न पुगेको छ ।

विषय प्रवेश

नेपालको संविधानमा शिक्षा स्वास्थ्यजस्ता ३१ ओटा विषयलाई मौलिक हकको रूपमा राखिएको छ । राज्यका निर्देशक सिद्धान्त र नीतिमा पनि यिनलाई राज्यको दायित्व र जिम्मेवारीभित्र समेटिएको छ । यसैगरी सरकारले आवधिक योजना तथा दिगो विकास लक्ष्यको फ्रेमवर्कमा सन् २०३० सम्म शिक्षा र स्वास्थ्य सेवामा नागरिकको पहुँचमा उल्लेख्य मात्रामा सुधार गर्ने समयसीमा पनि तोकिसकेको छ (राष्ट्रिय योजना आयोग, २०७६ र २०७६क) । नीतिमा लेखिनु र देखिनु पनि आफैंमा ठुला कुरा हो, जुन हासिल भइसकेको छ । अबको चासो भनेको कार्यान्वयनमा के भइरहेछ ? भन्ने नै हो ।

मौलिक हकको रूपमा रहेका शिक्षा र स्वास्थ्य सेवालाई संविधानको मर्मबमोजिम कार्यान्वयन गर्न यिनलाई सार्वजनिक प्रकृतिको बनाउनुपर्छ । अर्थात् यिनको जिम्मा राज्यले लिनुपर्छ । तर तथ्यले त्यसो भन्दैनन् । नेपाल मानव विकास प्रतिवेदन, २०२० ले स्वास्थ्य सेवामा व्यापारीकरण बढ्दो क्रममा रहेको छ, जुन आफैंमा स्वास्थ्य सेवालाई सर्वसुलभ र पहुँचयोग्य बनाउनका लागि ठुला चुनौती बन्दै गएको छ भनेर उल्लेख गरेको छ (NPC and UNDP, 2020) । यस्तै आशय शिक्षा, खासगरी निजी विद्यालयको हकमा पनि लागु हुने विषय प्रतिवेदनले घुमाउरो पारामा उठाएको छ । न्यु बिजनेस एजमा सुरक्षा अधिकारी (२०१३) ले उल्लेख गरेअनुसार नेपालमा स्वास्थ्य सेवामा खासगरी अस्पताल खोल्ने, सञ्चालन गर्ने कार्य निजी क्षेत्रका लागि लगानीको आकर्षक क्षेत्र बन्दै गएको छ । नेपालमा वर्तमान संविधान आइसकेपछि पनि शिक्षा र स्वास्थ्य सेवामा निजीको दायरा बढ्दै गएको छ । यस कार्यबाट सार्वजनिक क्षेत्रको दायरा अझ खुम्चने हुन्छ । यही गति र दरमा निजी क्षेत्र विस्तार हुने हो भने शिक्षा र स्वास्थ्य सेवा थप निजीकरणको चक्करमा पर्ने निश्चित छ ।

भएका संवैधानिक प्रावधान र नीति किन कार्यान्वयनमा आउन सकेका छैनन त ? संविधानका धारा तथा नीति आफै कार्यान्वयनमा जाने होइनन्, जान पनि सक्दैनन् । यसका लागि कानुन, बजेट तथा कार्यक्रम, संरचना एवम् जनशक्ति आदि आवश्यक पर्छन् । सोभन्दा पनि महत्त्वपूर्ण त नेतृत्वको प्रतिवद्धता हो । यसका साथमा अर्को विचारणीय पक्ष त कहाँ के लेखियो भन्दा पनि अहिले हामी के गरिरहेका छौं ? भन्ने हुन्छ ।

नागरिकका आधारभूत सेवाभित्र रहेका शिक्षा र स्वास्थ्य सेवा स्तरीय र सहजरूपमा सबै नेपालीलाई कहिले प्राप्त हुन्छ भन्नेमा सिद्धान्तको सिरानी लिई बोल्न सकिएला तर व्यावहारिक उत्तर तत्काल देखिन्न । किनकि शिक्षा र स्वास्थ्य सेवाको पूर्ण सार्वजनिकीकरण नगरी यस्ता सेवामा नागरिकको समन्यायिक पहुँच बढ्न सक्दैन । भनाइमा के छ भन्दा पनि गराइसम्बन्धी अहिलेका प्रयासले निजी क्षेत्र खुम्चनेभन्दा पनि सार्वजनिक क्षेत्र थप खुम्चन पुगेका छन् । खुम्चँदो सार्वजनिक क्षेत्रबाट यी सेवा सहज र पहुँचयोग्य बन्न सजिलो छैन । यो कार्य गर्न गाह्रो छ तर असम्भव चाँहि छैन ।

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शिक्षा र स्वास्थ्यसँग जोडिएका विषयमा गभर्नेन्सको अवस्था

राष्ट्रिय योजना आयोगबाट सन् २०२१ मा प्रकाशित दिगो विकास लक्ष्य प्रगति समीक्षा, २०१६-२०१९ प्रतिवेदन र दिगो विकास लक्ष्य स्थानीयकरण स्रोत पुस्तिका, २०२० का अनुसार सामाजिक सूचकहरूमा सुधार भएको देखिन्छ। यसका अनुसार बहुआयमिक गरिबी सूचकाङ्क सन् २०१९ सम्ममा ३५.१ प्रतिशतमा झार्ने लक्ष्य रहेकोमा २८.६ प्रतिशतमा झरेको छ। यसैगरी राष्ट्रिय गरिबी १८.६ प्रतिशतमा झरेको छ। प्रतिदिन १.९० डलर (पीपीपी मूल्य) आयभन्दा मुनि रहेको नेपालको जनसङ्ख्या सन् २०१५ मा ३६ प्रतिशत रहेकोमा सन् २०१९ मा १५ प्रतिशतमा झरेको छ। यो दरलाई २०३० सम्ममा आठ प्रतिशतमा झार्ने लक्ष्य छ।

यिनै प्रतिवेदनले औल्याएअनुसार प्राथमिक तहको खुद भर्ना दर सन् २०१९मा ९७.२ प्रतिशत, प्राथमिक तह पूरा गर्ने विद्यार्थीको सङ्ख्या ८९.५ प्रतिशत, १५ देखि २४ वर्ष उमेर समूहको साक्षरता दर ९९ प्रतिशत र प्राविधिक र व्यावसायिक क्षेत्रमा तालिम प्राप्त जनसङ्ख्या ४४ प्रतिशतभन्दा बढी छ। कुल जनसङ्ख्याको ८८ प्रतिशतमा आधारभूत खानेपानी र २१ प्रतिशतमा सुरक्षित खानेपानी एवं ८५ प्रतिशतमा शौचालयमा पहुँच पुगेको छ। सहरी वातावरणमा खासै सुधार नभए पनि सुरक्षित आवासमा पहुँच बढेको छ।

यसरी माथिका केही आर्थिक, सामाजिक र सशक्तीकरण सूचकहरूमा मुलुकको अवस्थामा सुधार आएको देखिन्छ। नेपाल मानव विकास प्रतिवेदन, २०२० का अनुसार दक्षिण एसियाका अन्य मुलुकको तुलनामा नेपालले राम्रै उपलब्धि हासिल गरेको छ। यो उपलब्धिको औसत आकँडा हो, तर निरपेक्ष अर्थमा मुलुकभित्र लैङ्गिक, क्षेत्रीय र स्थानीय समूहहरूको बिचमा अझै पनि ठुला विषमता रहेको छ (NPC & UNDP, 2020)। अर्कोतिर समग्रमा मुलुकमा जवाफदेहिता, पारदर्शिता तथा भ्रष्ट्राचार जस्ता सूचकमा औसतमा सुधार भएको देखिए तापनि आम जनताको सार्वजनिक सेवाको पहुँच र गुणस्तरमा उल्लेख्य सुधार भएको देखिदैन। नेपाल प्रशासनिक प्रशिक्षण प्रतिष्ठानले सन् २०१७/१८ मा गरेको गभर्नेन्ससम्बन्धी सर्वेमा कुल उत्तरदातामध्ये लगभग ८४ प्रतिशतले सार्वजनिक सेवामा आफ्नो मान्छे नभएर सेवा पाउन कठिनाइ भएको विषय भनेका छन् (NASC, 2018)। यस सर्वेको प्राप्तिले सार्वजनिक सेवा प्रवाहको अवस्थामा कीँह अनुमान लगाउन सक्ने आधार दिएको छ। चिनेको वा आफ्नो मान्छे भएमा मात्र सेवा पाउन सहज हुने भनाइ सुशासनको सन्दर्भमा कमजोर अवस्था हो भन्ने जनाउँछ।

प्रस्तुत आँकडाले समग्र शासकीय व्यवस्थाका साथमा शिक्षा र स्वास्थ्य सेवाका सम्बन्धमा पनि सुधार भएको देखाउँछ। तर यसभित्र विभिन्न क्षेत्र र समूहका बिचमा ठुला विषमता पनि छ भन्ने विषयलाई पनि उत्तिकै मात्रामा स्वीकार गर्नुपर्नेछ। भएको सुधार पनि सार्वजनिक क्षेत्रबाट मात्र सिर्जना भएको होइन। यस्तो सुधार सार्वजनिक र निजी दुवै क्षेत्रको योगदानको नतिजा हो। कसको कति मात्रामा योगदान छ भन्ने बारेमा थप अध्ययन आवश्यक हुन्छ।

आधारभूत तहको शिक्षा र स्वास्थ्यमा निजीक्षेत्रको योगदान छ भन्नुको मतलब त्यहाँ नागरिकले यस्तो सेवा निजी क्षेत्र अथवा बजारबाट खरिद गर्नु परेको छ भनेर स्वीकार गर्नुपर्छ। जब यस्ता आधारभूत सेवाका क्षेत्रमा व्यक्तिले रकम तिरेर सेवा लिनुपर्छ त्यहाँ गरिब र बिपन्न घरपरिवार सेवा खरिदका लागि तिर्नुपर्ने शुल्ककै कारण चर्को दबाबमा पर्ने हुन्छन् (थापा, २०१७)। कतिपय कम शुल्कमा पाइने सेवा खरिद गर्न लाग्छन्, कतिपय आवश्यक खर्च कटौती गर्न बाध्य हुन्छन् भने कतिले त सेवा खरिद गर्न नसकी अकल्पनीय अवस्था व्यहोर्न बाध्य पनि हुन सक्छन्।

शिक्षा र स्वास्थ्य सेवाउपलब्धताको अवस्था

आधारभूत तहसम्मको शिक्षा निशुल्क र अनिवार्य भनिए तापनि सो तहमा भर्ना भएकामध्ये लगभग १५ प्रतिशत बालबालिका निजी विद्यालयमा अध्ययनरत छन् (Bhatta & Pherali, 2017)। यो सङ्ख्या अहिले अझ बढेको हुन सक्छ। किनकि सार्वजनिक विद्यालयभित्र निजी तवरबाट कक्षा सञ्चालन गर्ने प्रवृत्ति बढ्दो क्रममा छ। छानो सार्वजनिक तर व्यवहार निजीजस्तै कक्षामा अध्ययनरत विद्यार्थीको सङ्ख्या जोड्ने हो भने यो सङ्ख्या अनुमान गरेभन्दा ठुला हुन सक्छ। यसैगरी स्वास्थ्यको क्षेत्रमा पनि केही निकायबाहेक धेरै सार्वजनिक निकायबाट पाउने सेवा अपर्याप्त र सेवाको स्तर पनि कमजोर छ। विशेषज्ञ सेवा पाउनका लागि धेरै नै कठिन छ। विशेषज्ञ सेवा लिनका लागि ठुला सहरमा रहेका स्वास्थ्य संस्थामा धाउनु पर्ने बाध्यता छ।

स्तरीय स्वास्थ्य संस्थाको अभावको मार प्रत्यक्ष रूपमा नागरिक स्वास्थ्यमा परेको छ। यस्ता विषय वा क्षेत्रमध्ये उदाहरणको रूपमा बालमृत्यदर, आमाको स्वास्थ्य, बालबालिकको विकास र बढ्दो स्वास्थ्य खर्च आदिबाट जीवनमा सिर्जना हुने नकारात्मक असरलाई लिन सकिन्छ। नेपाल हेल्थ डेमोग्राफिक सर्वे (२०१६) का अनुसार गरिब र धनी घरपरिवारका महिला पाउने बच्चाको सङ्ख्यामा पनि अन्तर छ। धनी घरपरिवारका महिलाको प्रतिमहिला फर्टिलिटी रेट एक दशमलव छ रहेकोमा यस्तो दर गरिब घरपरिवारका महिलाको हकमा तीन दशमलव दुई भएको देखिन्छ। बिपन्न एवम् शिक्षाको अवस्था कमजोर रहेका महिलाहरू धेरै बालबच्चा पाउन विवश छन्। शिक्षाको तह बढ्दै जाँदा बच्चा जन्माउने समयको अन्तर र सङ्ख्यामा पनि सुधार देखिएको छ। गरिबी र जोखिमपनासँग शिशु मृत्यु दर, बालमृत्यु दर र आमाको स्वास्थ्य अवस्था थप नकारात्मक बनेको देखिन्छ।

सार्वजनिक निकायबाट प्रवाह भएका शिक्षा र स्वास्थ्य सेवा तुलनात्मक रूपमा पर्याप्त र स्तरीय बन्न सकेका छैनन् केही

अपवादलाई छाडेर । यिनलाई सार्वजनिक सेवाको रूपमा प्रवाह गर्न सकिएको छैन । उपलब्ध सेवा पनि सहज र सर्वसुलभ छैनन् । यिनलाई संविधानतः मौलिक हक मानिएको छ तापनि खरिद गरेर सेवा लिनुपर्ने अवस्था छ । कम आय भएकाहरू व्यक्तिहरू स्तरीय शिक्षा र स्वास्थ्य सेवाबाट बञ्चित हुनुपर्ने अवस्था छ किनकि महँगो सेवा खरिद गर्ने क्षमता यिनीहरूसँग छैन । कतिपयलाई सेवा लिनका लागि जायजेथा बेच्नै पर्ने अवस्था पनि छ भने कतिपय सन्दर्भमा त्यसले पनि नपुग्न सक्छ । फेरि पनि उही प्रश्न अगाडि आउने गर्छ, आखिर शिक्षा र स्वास्थ्य सेवा सार्वजनिक स्वरूप वा प्रकृतिको किन बन्न सकेनन् त ?

माथि भनिएझैँ शिक्षा र स्वास्थ्य सेवाको सार्वजनिकीकरणमा राज्यको अहम भूमिका हुन्छ । तर निजी क्षेत्रलाई यस्ता सेवा प्रवाह गर्ने जिम्मा लगाउँदा नागरिकले खरिद गरेर मात्र लिन सक्छन् । खरिद गर्ने वस्तुको उपभोग खरिदकर्ताको हैसियतअनुसार हुने गर्दछ । संसारले मानिआएको के हो भने शिक्षा र स्वास्थ्य सेवा हैसियतका आधारमा निर्धारण हुनु हुन्न । संयुक्त राष्ट्र संघको मानव अधिकारसम्बन्धी विश्वव्यापी घोषणापत्र, १९४८ एवम् विश्वव्यापी अन्य सारभूत मान्यताका अनुसार पनि सबैले समन्यायिक ढङ्गबाट स्तरीय शिक्षा र स्वास्थ्य सेवा पाउने हक हुन्छ (www.un.org) ।

विकसित मुलुकमा आधारभूत शिक्षा र स्वास्थ्य सेवा राज्यको जिम्मामा छ तर कम विकसित मुलुकको अवस्था भिन्न छ । विकसित मुलुकमा सम्भव भएको प्रावधान कम विकसित मुलुकमा लागु गराउनका लागि आफ्ना समस्या केलाउनै पर्ने हुन्छ । त्यहाँबाट केही सिक्न त सकिएला तर कामचाँहि आफ्नै परिवेश र पृष्ठभूमिमा आधारित हुनुपर्छ ।

खास समस्या के त ?

शिक्षा र स्वास्थ्य सेवा सर्वसुलभ र सहज बन्न नसक्नुमा मुख्यत तीन कारणलाई लिन सकिन्छ । पहिलो, सुरुमा थाहा पनि भएन, शिक्षा र स्वास्थ्यलाई प्राथमिकतामा राख्नुपर्छ भन्ने बारेमा जिम्मेवार निकाय र पदाधिकारीलाई थाहै भएन र यसका बारेमा जान्ने कसरत पनि भएन । दोस्रो, थाहा त थियो तर बाध्यता वा विवशताले गर्दा सम्बन्धित निकाय र पदाधिकारीले प्राथमिकतामा राख्न सकेन, अरू विषयका आएका आग्रह टार्न नसकेर यस्तो हुनपुग्यो । तेस्रोमा, यिनलाई प्राथमिकतामा राख्नुपर्छ भन्ने थाहा थियो तर यसबाट तत्कालमा लाभ नआउने भएर यिनमा लगानी गरिएन । यीमध्ये पहिलो थाहा नभएर अनि दोस्रो प्रतिवद्धता नभएर काम गर्न सकिएन जुन खासै अस्वभाविक होइनन तर तेस्रोचाँहि थाहा हुदाँहुदै पनि तत्कालको लाभमा केन्द्रित भएर प्राथमिकता कायम हुन सकेन जुन सबैभन्दा खतरनाक पक्ष हो । किनकि निदाएको व्यक्तिलाई उठाउन सजिलो हुन्छ तर निदाएको नाटक गरेकोलाई उठाउन कठिन हुन्छ । अन्य मुलुकजस्तै नेपाल पनि यिनै तीन कारणमध्ये एउटा वा अन्य कारणले गर्दा आजको अवस्थामा रहन पुगेको हो । जुन मुलुकमा आज स्तरीय शिक्षा र स्वास्थ्य सेवा सहज र सर्वसुलभ छ उनीहरूले समयमै बुझेर प्राथमिकता दिए । आफ्नो अवस्था आफैले सुधार गर्दै लगे । सीमित स्रोतबाट सरकारको दायरा र क्षमता बढाउँदै लगे । निजी क्षेत्रलाई व्यापारका लागि आउने मौका दिएनन् । अन्य कतिपय मुलुक विभिन्न कारणले स्रोतलाई प्राथमिकीकरण गर्न नसकेर अझै पनि अलमलमा छन् । यी मुलुकले अबका दिनमा शिक्षा र स्वास्थ्यलाई प्राथमिकतामा राखेर मात्र पुग्दैन । यी क्षेत्रमा भएको निजी लगानी व्यवस्थापन थप अर्को चुनौती बन्दै गएको छ ।

सामान्य नियमअनुसार पनि व्यक्तिले केही पाउन केही गुमाउनै पर्छ । गुमाउनु पर्ने पक्षमा समय, स्रोत, परिश्रम, योगदान आदि हुन सक्छन् । कुनै प्रयासबिना लाभ पाउने सम्भावना अत्यन्त न्यून हुन्छ । यो नियम व्यक्तिलाई मात्र नभएर सङ्गठित संस्था एवम् सरकारको हकमा पनि लागु हुन सक्छ । सरकारले केही पाउनका लागि केही गुमाउनु पर्ने अवस्था आउँछ । गुमाउने के हो र पाउने के हो भन्नेमा जति छिटो स्पष्ट हुन सकियो त्यति मात्रामा नै लाभ छिटो लिन सकिने हुन्छ । मुलुकमा शिक्षा र स्वास्थ्य सेवाको विकास गर्ने हो भने अहिले गुमाउनु पर्ने पक्ष के के हुन् र लाभ पाउने विषय के के हुन् भनेर समयसीमासहित स्पष्ट ढङ्गबाट बताउन सक्नुपर्छ । सिङ्गापुर मलेसियामा क्रमशः लि क्वान यु र महाथिर मोहम्मदले गरेका कार्यबाट सिक्ने हो भने पनि सरकारले गर्ने कार्यमा प्राथमिकता कायम गर्ने, उपभोगमा खर्च कटौती गर्ने, नागरिकको बचतलाई लगानीका लागि प्रयोग हुने वातावरण तयार गर्ने आदि जस्ता कार्यमा ध्यान दिनुपर्ने हुन्छ (लिक्वान यु र महाथिरको जीवनी) ।

कहिलेकाँही सरकारलाई थाहा नभएर पनि शिक्षा र स्वास्थ्यले प्राथमिकता नपाएको हुनसक्छ । विद्यालयमा शिक्षक थप्ने कि बाटो खन्ने काम गर्ने भनेर सोध्ने हो भने धेरैको उत्तर बाटो खन्ने भन्ने हुनसक्छ । किनकि अधिक मानिस तत्कालको लाभ पाउन लालायित हुन्छन् । शिक्षक थप्ने कामबाट तत्कालमा खासै लाभ सिर्जना हुँदैन र लाभ पाउन पनि धेरै समय लाग्छ । सरकार दीर्घकालीनभन्दा पनि यस्तै तत्कालका लाभबाट निर्देशित हुनसक्छ । २०७७ साल चैत्र १६ गतेको कान्तिपुर दैनिकमा विश्व पौडेलले फेरि पुँजीगत खर्चका कुरा शीर्षकमा अर्थशास्त्री ड्यारोन आजभोलिको सन्दर्भ लिँदै कमजोर र बलिया राज्यले लिने नीतिका बारेमा उल्लेख गरेका छन्, जुन कम विकसित मुलुकको अवस्थासँग मिल्न जान्छ । उनका अनुसार बलिया राज्यले लगानीलाई दीर्घकालीन लाभमा केन्द्रित गर्छन् भने कमजोर राज्यले तत्कालका लाभमात्र हेर्छन् ।

कम आय भएका मुलुकमा यसै पनि सार्वजनिक स्रोतको आकार सानो हुने गर्छ, खर्चमा मितव्ययिता हुँदैन, चुहावटको मात्रा बढी हुन्छ, संरचना भद्दा हुन्छन् र स्वार्थ समूहको दबाब पनि उच्च हुन्छ । यस्तो अवस्थामा लामो समयपश्चात् लाभ दिने शिक्षा र स्वास्थ्यमा लगानी गर्न ठूलै आँट चाहिन्छ । यसैगरी अनावश्यक वा कम महत्त्वको स्थानमा भइरहेको खर्च कटौती

गर्न सक्नुपर्छ । यहाँ गुमाउने पक्ष रकम मात्र नभएर आफन्त बनी आउने स्वार्थ समूह, आफ्नो मान्छे पदमा भएको कारणले लाभ पाउने आशामा बसेका समूहलगायत धेरै हुन सक्छ । यी र यस्तै पक्ष नगुमाइकन दीर्घकालीन लाभ पाउन कठिन छ । नेपाल मानव विकास प्रतिवेदन, २०२० ले शिक्षा, स्वास्थ्य र रोजगारीको क्षेत्रमा गरिने खर्चलाई लगानी मानेको छ (NPC & UNDP, 2020) । तर यी क्षेत्रले प्राप्त गरेको सार्वजनिक बजेटको हिस्सा केलाउने हो भने मुलुकले यसमा लगानी गर्न सकेको छैन ।

राज्यले लगानीलाई प्राथमिकतामा दिई नीति र कार्यक्रम एवम् बजेट बनाउने र समयमै मितव्ययी ढङ्गबाट काम गरेमा विकास हुन धेरै समय लाग्दैन । हामीकहाँ यस्ता पक्षका बारेमा खासै बहस हुने गरेको छैन । कारण र असरका बारेमा सार्थक बहस भएकै छैनन् । अन्तरसम्बन्धित विषयहरूलाई उच्च प्राथमिकतामा राखेर अध्ययन अनुसन्धान भएका छैनन् । यसैगरी शिक्षा र विकासको बिचमा सरकारी तहमा खासै बहस हुन सकेको छैन । विश्वविद्यालयका कक्षाकोठामा भएको बहसको असर सरकारका निकायमा पुग्न सकेको छैन । हुन त हाम्रा विश्वविद्यालय बहस एवम् संवाद गर्ने भन्दा पनि राजनीति गर्ने थलो बनेका छन् । विज्ञ र सरकारी सयन्त्रको बिचमा के कस्तो उपाय, संयन्त्र र विधिले विकास छिटो हुन्छ भन्नेमा आवश्यक मात्रामा बहस हुन सकेको छैन । मानव विकास प्रतिवेदनका अनुसार मुलुकमा रूपान्तरणका लागि उत्पादन, वितरण, बचत, लगानी र रोजगारीका लागि समग्र रुमा आर्थिक, वित्तीय, मौद्रिक नीतिमा सुधारसहित शिक्षा स्वास्थ्य एवम् सामाजिक सुरक्षामा जोड दिनुपर्छ (NPC & UNDP, 2020) । यसबाट के देखिन्छ भने शिक्षा र स्वास्थ्यले मात्र मुलुकको रूपान्तरण हुन सक्दैन, यी आवश्यक हुन तर पर्याप्त होइनन । यिनले मुलुकको रूपान्तरणमा थप सहयोगी भूमिका निर्वाह गर्न सक्छन् । यिनका साथमा अन्य सामाजिक र आर्थिक परिसूचकहरू पनि सकारात्मक बन्नुपर्ने हुन्छ ।

भूमण्डलीकरणको यस युगमा मुलुकभित्रका प्रयासले मात्र पनि विकास नहुन सक्छ । प्रविधि र पुँजी बाहिरबाट पनि लिन सकिने हुन्छ । यही भएर विकासका लागि स्थानीय, राष्ट्रिय र अन्तर्राष्ट्रिय तहको सामूहिक प्रयास आवश्यक हुन्छ भनेर विश्व समुदायले दिगो विकास लक्ष्यको ढाँचा स्वीकार गरिसकेको छ । त्यसमा आवश्यक सहमति पनि जनाएको छ । दिगो विकास ढाँचाले शिक्षा विकासका आयामहरूका बारेमा सूक्ष्म ढङ्गबाट विश्लेषण गरेको छ । अर्थात् विकासको अवस्था हासिल गर्नका लागि गरिबी निवारण, स्वास्थ्य सुधार, शिक्षामा सुधार, लैङ्गिक समानतामा सुधार, आर्थिक वृद्धि जस्ता विभिन्न पक्षहरूमा सुधार भएको हुनुपर्छ भनिएको छ । यी र यस्तै गरी विकासका आयामलाई दिगो विकास लक्ष्यले १७ ओटा लक्ष्य र १६९ ओटा सूचक तय गरिएका छन् । (sustainabledevelopment.un.org, World Education Forum, राष्ट्रिय योजना आयोग, २०७६) । यसले पनि के देखाउँछ भने शिक्षा र स्वास्थ्यले मात्र विकासलाई हाँक्न सक्दैनन् तर सहयोगी बन्न भने सक्छन् । अझ भनौं, मुख्य सहयोगी रूपमा काम गर्न सक्छन् । यसका लागि समग्रतामा आधारित भई योजना तर्जुमा गर्नुपर्ने हुन्छ ।

महालेखा परीक्षकको प्रतिवेदन, २०७७ र अर्थ मन्त्रालयकै आर्थिक सर्वेक्षणका प्रतिवेदन केलाउने हो भने उपलब्ध स्रोत र साधनको परिचालनको पाटो कमजोर रहेको पाइन्छ । भएको स्रोतको परिचालनबाट लाभ सिर्जना हुँदै गुणोत्तरमा आधारित लगानीको अवधारणा व्यवहारमा अवलम्बन हुनुपर्ने हो । आर्थिक सर्वेक्षणका प्रतिवेदनलाई केलाउने हो भने पनि हामीकहाँ भएको खर्चको ठुलो मात्रा उपभोगमा लागेको छ (अर्थ मन्त्रालय, २०७७) । यही अवस्थामा रकम बढाए पनि खासै असर नपर्न सक्छ । जबसम्म उपलब्ध रकमलाई लगानीमा प्रयोग गर्न सकिँदैन उपभोगले प्रत्येक वर्ष भार वा दबाब थप्नेमात्र हो ।

कमजोरी पात्रको हो कि प्रवृत्तिको ?

केहीलाई लाग्ला सबै काम सरकारले गर्नुपर्छ । स्वभाविक रूपमा केही यस्ता कार्य छन् जसलाई सरकारले नै गर्नुपर्छ । यसो भनेर नागरिकले केही गर्नु पर्दैन भन्ने पनि होइन । नागरिकको स्वभाव, आचरण र क्षमता मिलेर राज्यको चरित्र र क्षमता बन्ने हो । हुन त नागरिकको आचरण र क्षमता बढाउनमा राज्यको भूमिका रहन्छ । तर नागरिक र राज्यको स्वभाव एकआपसमा सम्बन्धित हुन्छन् । एकले अर्कोलाई सहयोग गर्न सक्छन् । नागरिकका आधारभूत सेवा सुविधामा सुधार ल्याउने कार्य राज्यको हो तर यो कार्य आफैंमा निरपेक्ष रहँदैन । समाजको विश्लेषण पनि उत्तिकै आवश्यक हुन्छ ।

धेरैलाई लाग्ला विकास नहुनुमा स्रोत साधन नभएर हो । तर स्रोत साधन हुँदैमा विकास भइहाल्छ भन्ने पनि छैन । भएको स्रोत साधन के कसरी के कस्ता कार्यमा खर्च गरिएको छ भन्ने विषयले अहम महत्त्व राख्दछ । यसैगरी विकास के भन्नेमा पनि एकमत नहुन सक्छ । मुलुकमा शिक्षा र स्वास्थ्यमा सुधार आउन नसक्नुमा सरकार, समाज र स्वयम् व्यक्ति जिम्मेवार छन् । यी तीनै पक्षको चरित्र र भूमिकामाथि बहस आवश्यक हुन्छ ।

अहिले अधिकांश मानिस बाचुन्जेल धनसम्पत्तिको चाहना र तिर्सनामा भौतारिइरहेका देखिन्छन् । आफ्नो लागि गर्नु त स्वभाविकै होला । तर कहिल्यै मर्न पर्दैन जस्तो गरेर धनसम्पत्ति थुपार्न दौडिइरहेका व्यक्ति हाम्रै समाजमा हामीले देखेकै छौं । मानिसको यो चाहना अचम्मको देखिन्छ । मानिसको मनबाट सृजित चाहना तन्काउन पनि मिल्ने अनि खुम्च्याउन पनि मिल्नेजस्तो देखिन्छ । यही मनलाई नियन्त्रण गरेर राख्न पनि सकिने, मनलाई फुकाएर बढाउन पनि सकिने अचम्मको स्वभाव मानिसमा देखिन्छ । धनीहरूको क्लबमा धन सम्पत्ति कमाउने मात्र कुरा हुन सक्छन् । शायद आर्थिक वर्ग रूपान्तरण हुने समयमा यो चाहना अत्यधिक हुन सक्छ । जबसम्म व्यक्तिले ठिकलाई ठिक र बेठिकलाई बेठिक भन्ने क्षमता राख्दैन तबसम्म सरकार र यसका संरचनालाई जवाफदेही बनाउने कमैमात्र

विकल्प रहन्छन् ।

नेपालमा अहिले एकथरीबाट सकारात्मक भावना जागृत गर्ने वा आशा जगाउने खालका सूचना पाउन कठिन भइसक्यो । तीनलाई के छ भनेर सोध्यो भने नकारात्मक टिका टिप्पणीका विषयभन्दा अन्य कुरा सुन्न पाइनै छोड्यो (Shetty, 2020) । ठिक छ भन्ने व्यक्ति पाउनै गाह्रो भइसक्यो । जता गए पनि यो भएन र त्यो भएन भन्ने मात्र सुन्नु पर्छ । के अफिस, के चियापसल, के सार्वजनिक स्थान, सबै स्थानमा केवल बर्बादीका समाचार मात्र सुन्न सुनाउन होडबाजी छ । एकथरीले सबै सकियो भन्छन् भने अर्कोथरीले सबै राम्रो मात्र देख्छन् । आम नागरिकलाई वास्तविकता छुट्याउन कठिन भइसक्यो । केही व्यक्तिमा आफ्नो सानो कुरा भएन भने पनि सत्तोसराप गर्ने प्रवृत्ति छ । आफूले जे गर्‌े पनि ठिकै देख्ने तर अर्काको सानो कमजोरी पनि ठुला देख्ने संस्कार बढेको छ । व्यक्ति अति आत्मकेन्द्रित बन्दै गएको छ । समाज अझ बढी बिखण्डित बन्दै गएको छ । सामाजिक बन्धन अझ कमजोर बन्दै छन् । अब गाउँ ठाउँमा विद्यालय र स्वास्थ्य संस्था बनाउन जग्गा दान गर्ने व्यक्ति पाउन कठिन छ । केही रकम वा सहयोग दिनेहरू पनि सस्तो लोकप्रियता कमाउनका लागि (फोटो खिच्ने र सामाजिक सन्जालका भित्ता रङ्ग्याउने) प्रयोजनका लागि उक्त काम गरे जस्तो देखिन्छ । व्यक्ति र समाज यसैमा लागेको छ भन्दा अन्यथा नहुन पनि सक्छ । यसको प्रभाव कमजोर राज्यको कार्यशैलीमा स्वभाविक रूपमा पर्ने सम्भावना अधिक हुन्छ ।

व्यक्तिमात्र नभएर समाज पनि दिनानुदिन थप उपभोगमुखी बन्दै गएको छ । सबैले गरेपछि मैले पनि गर्नै पर्‌यो वा मैले किन नगर्ने भन्ने प्रवृत्तिबाट समाज अगाडि बढेको छ । नयाँ नयाँ सामग्री प्रयोग गर्ने चाहना बढ्दो क्रममा छ । प्रयोग गर्ने सामान र उपभोग गर्ने खाद्य पदार्थ आदि प्रतिको चाहना निरन्तर बढ्दो क्रममा छ । भौतिक साधन वा वस्तु प्रतिको आशक्ति जति बढायो त्यति मात्रामा बढ्ने हुन्छ । हुन त अध्यात्मिक सोच वा चेतनाको स्तर उच्च रहेकाहरूमा भौतिक वस्तुप्रतिको आशक्ति हुँदैन भन्ने गरिन्छ । यो त आदर्श अवस्था हो । आर्दशमा जे जस्तो विषय वा पक्षको उजागर गरे पनि आम मानिस धन सम्पत्ति, उपभोग, रवाफ प्रस्तुत गर्ने रोगभन्दा पर छैनन् । जबसम्म यसमा सुधार आउँदैन समाजमा सुधार आउन कठिन छ । यसले हामी सबैलाई उपभोगमुखी बनाइरहेको छ । मानिसको स्वभाव मिलेर राज्यको चरित्र बन्ने हुनाले राज्यको उपभोगमुखी स्वभावलाई पनि यही सन्दर्भमा हेर्नुपर्ने हुन्छ ।

मानिसका चाहनालाई राज्यले कुनै न कुनै रूपमा सीमित गर्ने प्रचलन छ । मानवीय आवश्यकताको सूचीमा रहेका सबै वस्तुलाई मान्छेको चाहनाबमोजिम उपभोग गर्न नपाइने व्यवस्था राज्यले गरेको हुन्छ । भनाइको मतलब मानवीय आवश्यकतामा रहेका केही वस्तुहरू व्यक्तिको चाहना अनुसार खरिद गरी प्रयोग गर्न पाइने सूचीमा राख्ने गरिन्छ भने केही वस्तुहरूप्रति व्यक्तिको चाहनालाई राज्यले सीमित गरिदिएको हुन्छ । अर्थात् राज्यले व्यवस्था गरेको दायराभित्र रही व्यक्तिले उपभोग गर्न पाउने हुन्छ । कतिपय वस्तुहरू व्यक्तिले शुल्क तिरेर मात्र पनि प्रयोग गर्न नपाइने हुन्छ । उदाहरणका लागि कुनै विषय पढ्नका लागि निश्चित अङ्क वा ग्रेड ल्याएको हुनुपर्छ । यस्ता विषय कानुनले मात्र तय गर्न सक्ने हुनाले राज्यले के कस्ता कानुन बनायो भन्ने विषय पनि आफैमा महत्त्वपूर्ण हुन्छ ।

यहाँ कमजोरी पात्र र प्रवृत्ति दुवैमा रहेको देखिन्छ । जबसम्म पात्र बदलिँदैन प्रवृत्ति बदलिन कठिन छ । तर यो गर्नै नसकिने काम भने होइन ।

अब के गर्ने त ?

सबै नागरिकलाई स्तरीय शिक्षा र स्वास्थ्य सेवा निश्चित समयमा उपलब्ध गराउनका लागि गर्नुपर्ने कामको पहिचान हुन आवश्यक हुन्छ । भइरहेका काममा नियमितता दिँदै सुधारका कार्यहरू र थप नयाँ कार्यहरूसमेत गर्नुपर्ने हुनाले यी सबै कार्यलाई सँगसँगै लैजानु पर्ने अवस्था छ ।

(क) हाल सार्वजनिक निकायहरूबाट भइरहेका काममा सुधार गर्ने कार्यलाई पहिलो प्राथमिकतामा राख्नुपर्छ । भएकै स्रोतको परिचालनबाट गर्न सकिने कार्यबाट सुधारको यात्रा तय गर्नुपर्छ । वर्षौंदेखि थलिएर बसेका सार्वजनिक निकायहरूमा यी कार्यहरू हुन त्यति सजिलो छैन । कार्यरत जनशक्तिलाई जवाफदेही, उत्तरदायी र प्रतिबद्ध बनाउनका लागि भएकै विधि, प्रक्रिया पालना गर्नु गराउनुपर्छ । तर यसका लागि राजनैतिक प्रतिवद्धता पहिलो सर्त हो । यसबाट जसलाई जुन कार्य गर्न भनिएको छ, सो कार्य त्यहाँबाट नै गर्न सहज हुन्छ । आफू पनि सोही अनुशासनमा बस्न सक्नुपर्छ ।

सन् १९७२ मा विल्डाभ्सकीले 'ह्वाइ प्रोज्क्ट फेल्ड' भन्ने शीर्षकमा उल्लेख गरेका बेथितिका धेरै कारणमध्ये विगतको समीक्षा नगर्ने र अमूक कारणले काम भएन भन्ने जुन प्रवृत्ति छ (Wildavsky, 1972) सो हाम्रो हकमा पनि मिल्छ । हामी पनि सुधारका लागि साना तथा मसिना कुरामा ध्यान नदिन्‌े अनि अरुको कारणले काम भएन भनेर देखाउने गर्छौं । बालविकास केन्द्रदेखि विश्वविद्यालय एवं प्राथमिक स्वास्थ्य चौकीदेखि ठुला अस्पताल सफा गर्ने, कार्यरत जनशक्तिलाई उत्तरदायी बनाउने, सेवाग्राहीप्रति नम्र व्यवहार गर्ने बानीले पनि धेरै सुधार हुन सक्छ । पहिलो पटक सेवा पाउनेहरू जब फर्केर घरपरिवार एवम् समाजमा पुग्छन् अनि सार्वजनिक निकायको सेवाको स्तर र विश्वसनियताका बारेमा अरुलाई बताउँछन्, त्यसबाट अरू पनि थप आर्कषित हुन्छन् । यसबाट सार्वजनिक निकायको साख बढ्न जान्छ, विश्वास बढ्न जान्छ, साथै सहभागिता पनि बढ्छ ।

सकारात्मक सोच राख्नेहरूले परिवर्तनका लागि व्यक्तिको मानसिकता वा सोचाइ बदलिन जरुरी छ भन्छन् (Shetty, 2020, and hiescottsdalehotel.com) । तर यो

काम पनि त्यति सजिलो कहाँ छ र ? मानसिकता वा सोचाइ बदल्नका लागि मानिसमा डर, त्रास, आशा, उत्प्रेरणा, विश्वास आदिको आवश्यकता पर्छ। २१ औं शताब्दीमा डर त्रासबाट मानिसलाई नियन्त्रण गर्न त नसकिएला तर कानुन पालना गर्ने संस्कार र सो नभएमा दण्ड जरिवाना व्यहोर्नुपर्छ भन्ने मानसिकता उपयोगी हुनसक्छ । परिवर्तनका लागि व्यक्तिलाई भित्रैबाट जगाउने कार्य अर्को उपाय हुनसक्छ (Shetty, 2020)। ट्राफिक नियम पालना नगरेमा जरिवाना तिर्नुपर्छ भने जस्तै सरकारी कर्मचारी ढिलो पुगेमा वा सेवा प्रवाहमा लापरवाही गरेमा के हुने ? जबसम्म व्यक्तिलाई जवाफदेही बनाउन सकिँदैन, तबसम्म सुधारका काम हुन कठिन छ। यसलाई अभ्यास गर्दै गएपछि चार्ल्स डुहिगले द पाओर अफ ह्याबिटमा भने झैं व्यक्तिको व्यवहार आदत बन्छ (Duhigg, 2013) । यसबाट सुधारले नियमितता पाउन थाल्छ ।

(ख) संविधानबमोजिम पनि स्तरीय शिक्षा र स्वास्थ्य सेवा र सुविधा नागरिकबाट सेवा शुल्क लिएर होइन कि राज्यको तर्फबाट सबैका लागि समान गुणस्तरको उपलब्ध हुनुपर्छ। शिक्षा र स्वास्थ्य सेवा सार्वजनिक वस्तु वा सेवाको रूपमा स्वीकार गर्ने हो भने यो काम सरकारले जिम्मा लिनुपर्छ (नेपालको संविधान २०७२) । सार्वजनिक वस्तु वा सेवा भनेकै आवश्यक खर्च राज्यले व्यहोर्ने भन्ने हो । यदि शिक्षा र स्वास्थ्य सेवा सार्वजनिक निकायबाट मात्र प्रवाह हुन्छन् भन्ने हो भने यहाँ सार्वजनिक वा सरकारी निकायबाहेक अन्य संस्थाको अस्तित्व रहँदैन । निजी वा सहकारी निकायले यस्ता सेवा प्रवाहमा स्थान पाउँदैनन् । यस्ता सेवा के कसरी प्रवाह हुन्छन् भन्ने विषयमा थप बहस गर्न पनि सकिएला । उदाहरणका लागि यस्तो सेवा प्रवाहमा सार्वजनिक, निजी र सहकारीमध्ये कुनै पनि निकायबाट हुनसक्छ तर जुन ढाँचा प्रयोग गरे पनि नागरिकबाट शुल्क लिनु चाँहि भएन ।

यस सन्दर्भमा थप बहस गर्नु पर्ने विषय शिक्षा र स्वास्थ्य सेवाको युनिट अर्थात् एकाइ व्यक्ति वा घरपरिवार हो कि सार्वजनिक निकाय हो । सार्वजनिक निकायबाट मात्र यी वस्तु वा सेवा प्रवाह हुन्छन् भन्ने हो भने सेवाको एकाइ व्यक्ति वा घरपरिवार नभएर सार्वजनिक निकाय हुने गर्छ। तर सेवाको एकाइ व्यक्ति वा घरपरिवार हो भने भौचर वा यस्तै अन्य माध्यम पनि प्रयोगमा आउन सक्ने भएकाले यस अवस्थामा निजी वा सहकारीको अस्तित्व रहन सक्छ। अहिलेको अवस्थामा शिक्षा र स्वास्थ्यसम्बन्धी सबै सेवा सार्वजनिक निकायबाट मात्र प्रवाह गर्छु भन्नु त्यति व्यवहारिक नहुन पनि सक्छ । सार्वजनिक भवनमा निजी व्यवस्थापनको अवधारणा बमोजिम पनि शिक्षा स्वास्थ्य सेवा प्रवाह हुन सक्छ । अन्य थप ढाँचा पनि उपयुक्त हुनसक्छन् ।

स्तरीय शिक्षा र स्वास्थ्य सेवा उपलब्ध गराउनमा पहिला त सार्वजनिक निकाय हुनुपर्थ्यो । तर नेपालको सन्दर्भमा अवस्था फरक छ । मुलुकका कानुन बमोजिम नै निजी वस्तु सरह किनबेच गर्ने विषयको रूपमा शिक्षा र स्वास्थ्य क्षेत्र परेका छन् । यिनको व्यवस्थापन नगरिकन यी दुवै क्षेत्रलाई पूर्ण सार्वजनिकीकरण गर्न सम्भव नहुन सक्छ । सुरुवाती दिनमा मध्यमार्गी बाटो खोजी गर्नु उपयुक्त हुने देखिन्छ । सार्वजनिक निकायको क्षमता बढाउँदै लैजाने र निजी क्षेत्रलाई क्रमशः बाहिरिने मौका दिएर व्यवस्थापन गर्न सके नेपालका लागि जित-जित (विन विन) अवस्था आउन सक्छ । साथै कतिपय अवस्थामा साझेदारीको अवधारणा पनि प्रयोगमा ल्याउन सकिन्छ ।

(ग) सामान्य रूपमा भन्ने गरिन्छ शिक्षा र स्वास्थ्यमा बजेट बढाउनुपर्छ। यसमा बिमति नहोला । तर यही ढाँचामा रहेर बजेट बढाउने हो भने पुरानै बाटोमा उही गतिमा हिँडेर नयाँ स्थानमा पुग्न खोज्नुजस्तै हो । विश्व स्वास्थ्य सङ्गठनले भने झैं Countries are spending more on health, but people are still paying too much out of their own pockets हुन्छ । (https://www.who.int/news/item/)। स्वास्थ्यमा बजेट त बढेको छ तर घरपरिवारले स्वास्थ्यमा गर्ने खर्चमा पनि वृद्धि भइरहेको हुन्छ । शिक्षामा पनि धेरै थोरै यस्तै भइरहेछ । आखिर यस्तो किन हुन्छ त ? बजेट विनियोजनमा समताको दृष्टिकोणको अभावमा यस्तो हुने गर्दछ । बजेट के कस्ता कार्यमा र कसका लागि खर्च भइरहेको छ भनेर विश्लेषण गरेर बिपन्न र कम आय भएका घरपरिवारलाई सहयोग गर्ने ढङ्गबाट बजेटको विनियोजन गर्न सकिएन भने बजेट बढ्दैमा यस्ता वर्गले लाभ लिन सक्दैनन् ।

(घ) सधैँ एउटै मार्ग र गतिमा हिडेँर नयाँ स्थानमा पुग्न सकिँदैन । पुग्ने भनेको पुरानै ठाउँमात्र हो । नयाँ स्थानमा पुग्नका लागि या त गति बढाउनुपर्छ या फरक बाटोबाट हिँड्नुपर्छ। यो भनेर हुने विषयभन्दा पनि गरेर नै देखाउनु विषय हो । अब पनि शिक्षा र स्वास्थ्यको जिम्मा राज्यले लिनुपर्छ भनेर पुग्दैन । यस्तो भनाइ धेरै समय अघिदेखि सुनिँदै आएको हो । यसका लागि अब देखिने गरी केही गर्नै पर्छ ।

सुरुमा सबै नागरिकका लागि स्तरीय शिक्षा र स्वास्थ्य सेवा भनेको के के हो भनेर स्पष्ट हुनुपर्छ । दोस्रोमा यी कार्य कसरी गर्ने भन्नेमा स्पष्टता चाहियो । काम गर्ने समय सीमा तोक्नु पर्‌यो । यस्ता विषयका तयार गरिने कार्ययोजना आम नागरिकले बुझ्ने ढङ्गबाट बनाउनुपर्छ। संघीय शासन व्यवस्थामा यो अझ आवश्यक हुन्छ अन्यथा निकाय पिच्छे फरक परिभाषा बन्न पनि सक्छ ।

यसका साथमा के के विषयक्षेत्रमा मेरिट प्रणाली र के कस्ता विषय वा क्षेत्रमा समावेशीकरण हो भन्नेमा पनि

थप स्पष्टता चाहिएको छ । कतिपय विषय वा क्षेत्रमा सोच, उच्च मानवीय संवेदना, संवेगले महत्त्व राख्दछ होला। यसैगरी जो व्यक्ति शिक्षा र स्वास्थ्य सेवामा संलग्न हुन चाहन्छ उनीहरूको मनोवृत्ति, संवेदनाको स्तर, कर्तव्यबोध र मानवीय पक्षका बारेमा पनि लेखाजोखा हुनु आवश्यक हुन्छ। मासु विक्री गर्ने व्यवसायमा संलग्न हुनेको मनोवृत्ति र शिक्षा स्वास्थ्यमा संलग्न हुनेको मनोवृत्ति फरक हुनुपर्छ। कुनै एक पेसाको लागि उपयुक्त मनोवृत्ति भएको व्यक्ति अर्को सेवा वा व्यवसायमा उपयुक्त नहुन पनि सक्ला ।

सारांश

मुलुकको शिक्षा र स्वास्थ्य सेवामा केही उपलब्धि हासिल भएका छन् । तर समस्या पनि उत्तिकै छन् । समस्याहरू सरल प्रकृतिका छैनन्, एक आपसमा जेलिएका छन् । सबै समस्याको समाधान एकै पटक हुन सक्दैनन् । यसका लागि स-साना समस्याहरू समाधान गर्दै जानु नै उपयुक्त हुन्छ ।

सबैभन्दा पहिला गर्नुपर्ने काम अनुगमन र नियमन नै हो । भएका कानुनी प्रावधानहरूको कार्यान्वयन गर्नु हो । पालना नगर्ने वा कार्यान्वयनमा तदारुकता नदेखाएमा कार्यवाही गर्ने स्वचालित प्रणाली चाहिन्छ । जवाफदेहिता बहन गर्न नसक्ने वा नगर्नेलाई कार्यवाहीको दायरामा ल्याउन सके यही स्रोत र साधनबाट धेरै सुधार हुन सक्छ ।

शिक्षा र स्वास्थ्य सेवालाई सर्वसुलभ र पहुँचयोग्य बनाउनका लागि नयाँ कानुन पनि चाहिन्छ । यस्ता कानुन तर्जुमा गर्दा सरोकारवालाहरूलाई विश्वासमा लिनु आवश्यक हुन्छ। अन्यथा यिनले कार्यान्वयनमा समस्या वा अवरोध सिर्जना गर्न सक्छन् । बजेट तथा कार्यक्रम लगानीको दृष्टिकोणबाट आउनुपर्छ। यसैगरी निजी क्षेत्रको व्यवस्थापन अर्को महत्त्वपूर्ण र चुनौतीपूर्ण काम हो । तर गर्नै नसकिने काम भने होइन ।

शिक्षा र स्वास्थ्य जस्ता विषय अन्य मालसमान वा वस्तुका विषय जस्ता हुन नसक्ने भएकाले यसमा सरकारले सबैको जिम्मवारी र समयसीमा सहितको कार्ययोजना बनाई कार्यान्वयनमा लैजानुपर्छ । दीर्घकालीन सोच, उपयुक्त नीति, बजेट तथा कार्यक्रम, संरचना र जनशक्ति एवम् संस्थागत क्षमताका बारेमा समयमै ध्यान दिनुपर्छ। यसबाट नै मुलुकका नागरिकले कहिलेसम्म स्तरीय शिक्षा र स्वास्थ्य सेवा पाउन सक्छन् भन्ने प्रश्नको निरुपण हुनसक्छ ।

सन्दर्भ सामग्री

अर्थ मन्त्रालय (२०७७), आर्थिक सर्वेक्षण २०७६।७७, काठमाडौः अर्थ मन्त्रालय ।

नेपालको संविधान २०७२ ।

महाथिर मोहम्मदः विर्कासित मलेसियाका सूत्रधार, अनुवादक अच्युत कोइराला, पाँच पोखरी प्रकाशन ।

महालेखा परीक्षकको कार्यालय (२०७७), महालेखा परीक्षकको सन्ताउन्नौं वार्षिक प्रतिवेदन (२०७७), काठमाडौः महालेखा परीक्षकको कार्यालय ।

राष्ट्रिय योजना आयोग (२०२०), दिगो विकास लक्ष्य प्रगति समीक्षा, २०१६- २०१९, काठमाडौः राष्ट्रिय योजना आयोग ।

राष्ट्रिय योजना आयोग (२०२०), दिगो विकास लक्ष्य स्थानीयकरण स्रोत पुस्तिका २०२०, काठमाडौः राष्ट्रिय योजना आयोग ।

राष्ट्रिय योजना आयोग (२०७६), पन्ध्रौं आवधिक योजना २०७६/७७-२०८०/८१, काठमाडौं ।

राष्ट्रिय योजना आयोग (२०७६क), दिगो विकासका लक्ष्यहरूः अवस्था तथा मार्गचित्र २०१६-२०३०, काठमाडौं ।

लि क्वान युः एक पुस्ताको समृद्ध राष्ट्र, बुकवेल प्रकाशन बागबजार ।

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चिकित्सा शिक्षामा थप शैक्षिक कार्यक्रमका रूपमा नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिजको स्पेसियालिटी र सब-स्पेसियालिटी कार्यक्रम

✍ महेश्वर शर्मा

उपसचिव, चिकित्सा शिक्षा आयोग, सानोठिमी, भक्तपुर ।

सारसंक्षेप:

नेपालमा चिकित्सा शिक्षा विधालाई अझ व्यवस्थित, सर्वसुलभ, समन्यायिक, भौगोलिक रूपमा सबै वर्ग र क्षेत्रमा समान पहुँच सुनिश्चित गर्न राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ र नियमावली, २०७७ जारी गरियो । यिनै ऐन तथा नियमावलीले निर्दिष्ट गरेका व्यवस्थाहरूको कार्यान्वयन गर्न व्यवस्थापकीय पूर्वाधारहरू, कार्यविधिहरू तथा निर्देशिकाहरूको तर्जुमा गरी कार्यान्वयनमा रहेका छन् ।

उक्त कार्यविधि बमोजिम भौतिक र शैक्षिक पूर्वाधार उपयुक्त भएका स्वास्थ्य संस्था एवम् अस्पतालहरूमा स्पेसियालिटी र सब-स्पेसियालिटी तहको अध्ययन अध्यापन गर्ने कार्य प्रक्रिया अगाडि बढेको छ ।

स्पेसियालिटी र सब स्पेसियालिटीको पाठ्यक्रम निर्माण सम्बन्धी कार्य, फ्याकल्टीको पहिचान, विद्यार्थीको छनौटका लागि एकीकृत प्रवेश परीक्षा, स्वास्थ्य संस्था/अस्पतालको अनुगमन मूल्याङ्कन, उपाधि प्रदान, समकक्षाता आदि सम्बन्धी कार्यहरू आयोगको कार्यक्षेत्रभित्र पर्दछन् ।

यस कार्यविधि बमोजिम हुने पठनपाठन मितव्ययी रूपमा अभ्यासयुक्त हुने, आधारभूत सैद्धान्तिक ज्ञान, चिकित्सा विधामा विकास भएका नवीन प्रविधि, र सिप, अनुसन्धान तथा सूचना प्रविधि, व्यावसायिकता तथा पेशाधर्मिता, सामाजिक उत्तरदायित्व, नेतृत्व व्यवस्थापन र सामूहिकता लगायतका विषयहरूमा विद्यार्थीहरू निपुण हुने अपेक्षा गरिएको छ । यस कार्यक्रममा विद्यार्थी र फ्याकल्टी (शिक्षक) अत्यन्त नजिक हुने अवसर रहन्छ भने विद्यार्थीले आवासीय चिकित्सकको रूपमा रही आफ्नो पठनपाठन अगाडि बढाउन सक्ने देखिन्छ ।

विषय प्रवेश

नेपालको वर्तमान संविधानले नेपाली नागरिकहरूलाई राज्यबाट आधारभूत स्वास्थ्य सेवा निःशुल्क प्राप्त गर्ने हक हुनेछ र कसैलाई पनि आकस्मिक स्वास्थ्य सेवाबाट बञ्चित गरिने छैन भन्ने प्रत्याभूत गरेको छ । चिकित्सा शिक्षाका निर्देशक सिद्धान्तबमोजिम चिकित्सा शिक्षाको दायित्व भनेको स्वास्थ्यको क्षेत्रमा राष्ट्रिय आत्मनिर्भरता प्राप्त गर्ने, सुलभ, सवल र न्यायपूर्ण स्वास्थ्य सेवा प्राणालीको स्थापना गर्ने, जनताको जीवन मरणसँग प्रत्यक्ष सरोकार राख्ने चिकित्सा शिक्षा विषयको योजना र नियमनको जिम्मेवारी सरकारले लिने र समाजको सेवामा निस्वार्थ ढङ्गले चिकित्सा शिक्षा समर्पित रहने कुरालाई आत्मसात् गरेको पाइन्छ । यसै कुरालाई दृष्टिगत गरी राष्ट्रिय स्वास्थ्य नीति, २०७१ ले स्वास्थ्य सेवा प्रभावकारी रूपमा प्रवाह गर्न आवश्यक दक्ष जनशक्तिको योजना उत्पादन, प्राप्ति, विकास तथा उपयोग गर्ने नीति लिएको देखिन्छ ।

पन्ध्रौं योजनामा स्वास्थ्य सेवामा सरकारको नेतृत्वदायी भूमिका सुनिश्चित गर्दै सरकारी निजी तथा गैरसरकारी क्षेत्रको सहकार्य तथा साझेदारीलाई व्यवस्थापन तथा नियमन गर्ने रणनीति रहेको छ भने चिकित्सा शिक्षामा सुशासन कायम गर्न स्वास्थ्य सेवाका मूल्य मान्यतालाई निश्चित मापदण्ड बनाई नियमन गरिने कार्यनीति रहेको छ ।

चिकित्सा शिक्षाको क्षेत्रमा राज्यको लगानी अभिवृद्धि गरी चिकित्सा शिक्षालाई राष्ट्रिय आवश्यकता अनुरूप विकास गर्नु आवश्यक छ । चिकित्सा शिक्षाको लागि शिक्षण संस्थाको स्थापना, सञ्चालन, नियमन गरी शिक्षाको गुणस्तर, संस्थागत जवाफदेहिता, भौगोलिक सन्तुलन कायम गरी सबै विद्यार्थीहरूको समान पहुँच सनिश्चत गर्नुपर्ने देखिन्छ ।

राज्यद्वारा चिकित्सा शिक्षाको क्षेत्रमा देखिएका विभिन्न समस्याहरूको समाधान गर्न र चिकित्सा शिक्षाको क्षेत्रलाई व्यवस्थित गरी उच्च गुणस्तरयुक्त दक्ष जनशक्ति उत्पादन गर्ने अभिप्रायले नेपाल सरकारले राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ र नियमावली, २०७७ को निर्माण गरी कार्यान्वयन गर्दै आएको छ । चिकित्सा शिक्षा विधामा सरकारी क्षेत्र र निजी क्षेत्रबाट मेडिकल कलेजहरू स्थापना भई पठनपाठन हुँदै आइरहेको छन् ।

अन्तर्राष्ट्रिय अभ्यासलाई समेत आत्मसात गर्दै राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ ले स्नातकोत्तर तह र सोभन्दा माथिल्लो तहको नवीनतम् पद्धतिद्वारा चिकित्सा शिक्षाको पाठनपाठनको लागि चिकित्सा शिक्षा आयोगलाई जिम्मेवारी सुम्पिएको छ ।

यस बोर्डको मुख्य कार्यहरू देहायबमोजिम हुने गरी चिकित्सा शिक्षा नियमावली, २०७७ को दफा ३१ मा उल्लेख गरिएको छ ।

Corresponding Author

महेश्वर शर्मा

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क. चिकित्सा शिक्षाको क्लिनिकल विधामा स्पेसियालिटिजका नयाँ कार्यक्रम सम्बन्धी पाठ्यक्रमको तयारी
ख. पूर्वाधार पूरा गरेको स्वास्थ्य संस्थामा स्पेसियालिटिजका कार्यक्रम सञ्चालन
ग. क्लिनिकल विधामा स्पेसियालिटिजका नयाँ कार्यक्रम सम्बन्धी तालिम सञ्चालन गर्ने संस्था, फ्याकल्टी पहिचान सम्बन्धी कार्य
घ. स्पेसियालिटिजका क्लिनिकल विधामा अध्ययनका लागि सिट सङ्ख्या, र सहभागीको सूची तयारी
ङ. आयोगबाट निर्धारित मापदण्डको अधीनमा रही नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिजको परीक्षा सञ्चालन,
च. अनुगमन तथा मूल्याङ्कन पद्धति निर्माण र कार्यान्वयन,
छ. मेडिकल स्पेसियालिटिजका सम्बन्धमा राष्ट्रिय तथा अन्तर्राष्ट्रिय संघ संस्थासँग परामर्श

संस्था/ अस्पताल छनौट सम्बन्धी प्रावधान

मूलत: चिकित्सा विधामा स्नातकोत्तर र सोभन्दा माथिल्लो तहको शैक्षिक कार्यक्रम सञ्चालन गर्नु अत्यावश्यक देखिएको छ । नेपालमा सञ्चालित विशिष्टीकृत सेवा प्रदान गर्ने अस्पतालहरूमा यो पद्धतिमा पठनपाठन गर्न गराउन सकिन्छ । जस्तै: न्युरो, क्यान्सर, मिर्गौला रोग, मुटुरोग, आँखासम्बन्धी रोग, हाड जोर्नी, अङ्ग प्रत्यारोपण, बालरोग आदि ।

पर्याप्त मात्रामा भौतिक पूर्वाधारहरू रहेका र आवश्यक मात्रामा फ्याकल्टीहरू भई पर्याप्त मात्रामा विरामीको चाप रहेका अस्पताल/स्वास्थ्य संस्थाहरू शैक्षिक कार्यक्रम गर्न इच्छुक भएमा त्यस्ता संस्थाहरूमा यो शैक्षिक कार्यक्रम सञ्चालन गर्न पाउने व्यवस्था रहेको छ ।

नेसनल बोर्ड अफ मेडिकल स्पेसियालिटी कार्यक्रम कार्यविधि, २०७७ ले तपसिल बमोजिमको पूर्वाधार तोकेको छ:

तपसिल:

१. 200-300 शैया भएका बहुविद्या (Multi–Speciality) सेवा भएका अस्पतालले एकभन्दा बढी विषयमा कार्यक्रम सञ्चालन गर्न सक्नेछन् ।
२. १०० शैया वा सोभन्दा माथिका विशिष्टीकृत सेवा भएका अस्पतालले एक भन्दा बढी स्पेसियालिटी विषयका कार्यक्रम सञ्चालन गर्न सक्नेछन् ।
३. १०० शैयासम्म क्षमता भएका विशेषज्ञ अस्पतालले सोही विषयका कार्यक्रम सञ्चालन गर्न सक्नेछन् ।
४. बोर्डअन्तर्गत सञ्चालन हुने कार्यक्रममा आवद्ध हुन चाहने संस्थाले सम्बन्धित सरकारको स्वास्थ्य सम्बन्धी मापदण्ड पूरा गरेको हुनुपर्नेछ ।
५. बोर्डअन्तर्गत सञ्चालन हुने कार्यक्रममा आवद्ध हुन चाहने अस्पताल/स्वास्थ्य संस्थामा तोकिएको कार्यक्रमको लागि आवश्यक भौतिक संरचना तथा अतिरिक्त क्रियाकलापको सुविधा भएको हुनु पर्नेछ ।
६. प्रतिष्ठान विश्वविद्यालय वा विश्वविद्यालयबाट सम्बन्धन प्राप्त शिक्षण संस्थामा यस कार्यविधि बमोजिम कार्यक्रम सञ्चालन हुने छैन ।

शैक्षिक कार्यक्रम सञ्चालन गर्ने सम्बन्धमा बोर्डले सम्बन्धित सरोकारवाला अस्पतालहरू एव संस्थाहरूसँग स्व-मूल्याङ्कन फाराम (Self–Appraisal form) भर्न आह्वान गर्नेछ । यस्तो आह्वानबमोजिम फाराम भर्ने अस्पताल एवं संस्थाहरूको सम्बन्धित विज्ञहरूको समूहबाट अनुगमन, निरीक्षण, मूल्याङ्कन हुने प्रावधान रहेको छ ।

स्पेसियालिटी र सब-स्पेसियालिटी कार्यक्रमको पाठयक्रम

बोर्डबाट सञ्चालन हुने स्पेसियालिटी तहमा कार्यक्रम देहायका विषयहरूमा हुने प्रावधान छ:

स्पेसियालिटी तहका कार्यक्रमहरु :

1. Anaesthesiology
2. Community Medicine
3. Emergency Medicine
4. General practice
5. General surgery
6. Health Care management
7. Internal Medicine
8. Obstretrics and Gynaecology
9. Ophthalmology
10. Orthopaedics and TruamaSurgery
11. Otorhinolaryngology and Head Neck Surgery
12. Paediatrics
13. Radiation Oncology
14. Radiudiagnosis
15. Pathology

सब-स्पेसियालिटी तहका कार्यक्रमहरु:

1. Cardiology
2. Cardiothoracic and Vascular Surgery
3. Critical Care Medicine
4. Endocrinology
5. Gastrointestinal Surgery
6. Gynae Oncology
7. Haemato Oncology
8. Hepatobiliary and pancreatic Surgery
9. Hepatology
10. Infectious Diseases
11. Interventional Radiology
12. Medical Oncology
13. Nephrology
14. Neurology
15. NeuroSurgery

16. Paediatric Anaesthesiology
17. Paediatric Critical Care Medicine
18. Plastic Surgery
19. Pulmonology
20. Rheumatology
21. Reproductive and Fertility Medicine
22. Surgical Oncology
23. Thoracic Surgery
24. Transplant Anaesthesiology
25. Uro Surgery
26. Head and Neck Oncology
27. Uro Gynaecology

उपाधि तथा मान्यता

स्पेसियालिटी तहको कार्यक्रम स्नाकोत्तर तह/एम डि/एम एस (MD/MS) सरहको हुने छ । यस कार्यक्रममा उत्तीर्ण विद्यार्थीलाई फेलोसहितको उपाधि प्रदान गरिने छ। उदाहरणका लागि रेडियोलोजी विषयको लागि फेलो अफ नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिज रेडियोलोजी (एफ.एन.वि.ए.एम.एस रेडियोलोजी), जनरल सर्जरीका लागि फेलो अफ नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिज जनरल सर्जरी (एफ.एन.वि.एम.एस जनरल सर्जरी) आदि।

सब-स्पेसियालिटीतहको कार्यक्रम डि.एम/एमसिएच (DM/Mch) तह सरहको हुनेछ । यस कार्यक्रममा उत्तीर्ण विद्यार्थीलाई फेलोसहितको उपाधि प्रदान गरिने छ । उदाहरणका लागि इन्ड्रोक्राइनोलोजी विषयको लागि फेलो अफ नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिज (एफ.एन.वि.एम.एस-इन्डोक्राइनोलोजी), थेरासिक सर्जरीका लागि फेलो अफ नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिज थेरासिक सर्जरी (एफ.एन.वि.एम.एस.-थेरासिक सर्जरी) आदि ।

नेपालमा विश्वविद्यालयहरू तथा प्रतिष्ठानहरूबाट चिकित्सा विधाका क्षेत्रमा शैक्षिक कार्यक्रमहरू सञ्चालन हुँदै आइरहेका छन् । नेपालको वर्तमानको आवश्यकता र अन्तर्राष्ट्रिय प्रचलनसहितको आधारमा नेपाल सरकार चिकित्सा शिक्षा आयोगले सक्षम अस्पताल एव संस्थाहरूमा समेत उच्च तहको चिकित्सा शिक्षा विधाको अध्यापन गराउने कार्यक्रम राखेको छ । विशिष्टीकृत स्वरूपको स्वास्थ्य सेवा उपलब्ध गराउने संस्थाका/अस्पतालमा रहेको भौतिक पूर्वाधार, उच्च दक्षतायुक्त विशेषज्ञ चिकित्सकहरूको सहयोग र समन्वयमा कार्यक्रम सञ्चालन हुनेछ । यसप्रकारको विधि र पद्धधिबाट सञ्चालन हुने कार्यक्रमबाट उत्पादन हुने जनशक्ति व्यावहारिक रूपको उच्च दक्षतायुक्त हुने आकलन गरिएको छ । यस प्रकारका संस्थाहरूको व्यावहारिक अनुभव, ज्ञान र सिपलाई सैद्धान्तिक विषयवस्तुसँग सामञ्जस्यतापूर्ण तवरबाट विद्यार्थीहरू अभ्यस्त हुनेछन् । यस प्रकारको शैक्षिक कार्यक्रमबाट सम्बन्धित अस्पताल/संस्थाहरू, त्यहाँ कार्यरत चिकित्सकहरू र विद्यार्थीहरूसमेत लाभान्वित हुने कुरामा दुईमत नहोला ।

कार्यान्वयनका चुनौती र समाधानका उपायहरु

नेपालको चिकित्सा शिक्षा प्रणाली विविधतायुक्त पाइन्छ। चिकित्सा शिक्षा सञ्चालनमा प्रतिष्ठानहरू, विभिन्न विश्वविद्यालय मातहत मेडिकल कलेजहरू सञ्चालनमा रहेका छन् । नेपाली सेना मातहतमा पनि मेडिकल कलेज सञ्चालनमा रहेको छ ।

चिकित्सा शिक्षा आयोग ऐन, २०७५ बमोजिम चिकित्सा शिक्षाको विधामा उच्च तहमा अध्ययन गर्न गराउन मेडिकल स्पेसियालिटी र सब स्पेसियालिटीको छुट्टै प्रणाली रहेको छ । नेपालको सन्दर्भमा यो नवीन प्रणाली हो । यो प्रणालीले नेपालमा रहेका अस्पतालहरूको भौतिक पूर्वाधार, शैक्षिक पूर्वाधार, दक्ष मानवीय जनशक्तिको परिचालन गर्ने उद्देश्य राखेको छ । नेसनल बोर्ड अफ मेडकिल स्पेसियालिटिज कार्यक्रम सञ्चालन कार्यविधि, २०७७ ले उच्च तहमा स्पेसियालिटी र सव स्पेसियालिटीको अध्ययन अध्यापन गरी थप विशेषज्ञ उत्पादन गर्न ढोका खुला गरेको छ । यसबाट उत्पादन हुने विशेषज्ञ स्तरको जनशक्ति देशको दुर्गम भूभागमा समेत पुगेर विशेषज्ञ सेवा प्रवाह गर्न सम्भव हुने आंकलन गर्न सकिन्छ ।

नेपालको सन्दर्भमा चिकित्सा शिक्षा विधाको उच्च तहमा अध्ययन गर्न चाहने विद्यार्थीको सङ्ख्या ठुलो छ । शैक्षिक वर्ष २०७७ मा चिकित्सा शिक्षा आयोगले MD/MS वा सो सरहको विषयमा अध्ययन गर्ने प्रयोजनको लागि लिएको प्रवेश परीक्षामा ७, ६८३ जना विद्यार्थीहरू सम्मिलित भएकोमा ३, ८३९ जना विद्यार्थीहरू उत्तीर्ण भएका थिए । यसरी उत्तीर्ण भएका विद्यार्थीहरूमध्ये १, ५६५ ले उच्च शिक्षा अध्ययनको अवसर प्राप्त गरेका छन् । २, २७४ जना विद्यार्थीहरू चाहेर पनि अध्ययन गर्ने अवसर प्राप्त गर्न सकेका छैनन् । नेपालमा अध्ययन गर्ने अवसर प्राप्त नगर्ने विद्यार्थीहरू भारत, चीन वंगालादेश, पाकिस्तान लगायत युरोपेली देशहरू, अमेरिका आदिमा अध्ययनको लागि बाहिरने अवस्था विद्यमान रहेको छ । यस परिस्थितिमा नेपालमा नै थप संस्थामा अध्ययनको अवसर उपलब्ध गराउनु पक्कै पनि सुखद् कुरा हुनसक्छ ।

यद्यपि नेपालमा यो नयाँ प्रयोगको क्षेत्र भएको, कतिपय विषय र अवस्थामा पूर्वानुमान गर्ने नसिकने हुँदा यस कार्यमा विवादहरू, व्यावधानहरू पनि आउन सक्ने सम्भावना रहन्छ । तसर्थ यस प्रयासमा समस्या नआउन भन्नका लागि संरचागत, नीतिगत र कार्यक्रमगत रूपमा स्पष्ट भई कार्यक्रम कार्यान्वयन गर्न आवश्यक हुन्छ । समस्या नै समाधानको उपाय खोज्ने बाटो भएको हुँदा कार्यान्वयनका क्रममा आउने समस्याहरू क्रमशः निराकरण हुँदै जाने विश्वास गर्न सकिन्छ ।

नीतिगत व्यवस्था र अन्यौलता/समस्याहरु

स्पेसियालिटी र सब-स्पेसियालिटीतहको शैक्षिक कार्यक्रम सञ्चालन गर्ने सन्दर्भमा कार्यविधिले तोकेको भौतिक पूर्वाधार

(अस्पतालको बेड सङ्ख्या, विरामीको सङ्ख्या, फ्याकल्टीको सङ्ख्या, प्रयोगात्मक कक्षा, पुस्तकालय, अपरेसन थियटर, रोग निदानका लागि यन्त्र उपकरण) हरूको यथोचित प्रबन्ध भएको अस्पताल, स्वास्थ्य संस्था (मेडिकल कलेज बाहेक)उपलब्ध हुन आवश्यक पर्दछ। यस प्रकार पूर्वाधार भएका संस्था/अस्पतालले स्पेसियालिटी र सब स्पेसियालिटिज कार्यक्रम सञ्चालन गर्न इच्छुक हुनु समेत अत्यावश्यक छ। शैक्षिक कार्यक्रम सञ्चालन गर्न इच्छा नभएको खण्डमा कार्यक्रमले सफलता प्राप्त गर्न कठिन हुन सक्छ।

चिकित्सा शिक्षा आयोगको समन्वय, सहयोग, नियमनमा अस्पतालहरूमा सञ्चालन हुने स्पेसियालिटी र सब स्पेसियालिटीको पाठ्यक्रम, पठनपाठन विधि, चिकित्सा विधाको प्रयोगात्मक पक्ष, परीक्षा प्राणाली, उपाधिको विषयमा स्पष्टता हुन बाँकी रहेको वर्तमान सन्दर्भमा विद्यार्थीको रुचि कस्तो रहला भन्ने विषय अस्पष्ट नै छ। यस प्रस्तावित कार्यक्रममा विद्यार्थीले रुचि राखेनन् भने कार्यक्रमको प्रभावकारितामा प्रश्न चिन्ह उठ्न पनि सक्ने हुन्छ। यस सन्दर्भमा आयोगले सरोकारवाला पक्षहरू सबैलाई समेट्ने र राष्ट्रिय, अन्तर्राष्ट्रिय अनुभव तथा अभ्यासलाई आत्मसात् गरी पूर्व सक्रियता अपनाई यस सम्बन्धी नीति, विधि, प्रक्रिया तय गरी सचेततापूर्वक कार्यक्रमलाई अगाडि बढाउनु पर्ने देखिन्छ। यस कार्यका लागि सरोकारवालाहरूसँग अभिमुखीकरण, अन्तर्क्रिया, छलफल कार्य गर्न आवश्यक छ।

स्पेसियालिटी र सब-स्पेसियालिटी तहको पाठ्यक्रम निर्धारणको कार्य प्रक्रियामा रहेको छ।

स्पेसियालिटी र सब-स्पेसियालिटीतहको शैक्षिक कार्यक्रम सञ्चालन गर्न अस्पतालहरूको भौतिक पूर्वाधार (भवन, शैया, संस्था प्रयोगशालाको व्यवस्था पुस्तकालय जनशक्तिको उपलब्धता, विरामीको चाप लगायतका) हरूको स्पष्टता हुन आवश्यक छ।

अबको कार्य दिशा

चिकित्सा शिक्षा विधामा स्पेसियालिटी र सब-स्पेसियालिटी तहको शैक्षिक कार्यक्रमलाई अगाडि बढाउने सन्दर्भमा चिकित्सा शिक्षा आयोगको महत्त्वपूर्ण भूमिका रहन्छ। यस कार्यक्रमलाई सञ्चालन गर्ने दायित्व योग्यता र क्षमता पुग्ने अस्पतालहरूमा रहन्छ। चिकित्सा विधामा इच्छुक विद्यार्थीहरू यस शिक्षा विधाका मुख्य सरोकारवाला विद्यार्थीहरू हुन्। यस विधामा संलग्न रहने निकायहरूको भौतिक तथा प्राज्ञिक क्षमता, जनशक्ति र व्यवस्थापकीय पक्ष सवल र सुदृढ हुनु आवश्यक छ।

स्पेसियालिटी तथा सब-स्पेसियालिटी शैक्षिक कार्यक्रम नवीन प्रणालीको भएको हुँदा यो कार्यक्रम सञ्चालनमा सरोकार राख्ने, सहभागी हुनुपर्ने संस्थाहरूको लागि शैक्षिक कार्यक्रमका बारेमा जानकारी हुनु अत्यावश्यक छ अन्य सम्बद्ध सरकारी एवम् गैर सरकारी निकायमा समेत यस कार्यक्रमको बारेमा जानकारी गराउनु आवश्यक छ। कार्यक्रमको अभिमुखीकरणपश्चात् कार्यक्रमको लागि समन्वय सहकार्यका पक्षमा सहजता हुन जान्छ।

स्पेसियालिटी र सब-स्पेसियालिटी कार्यक्रमको सञ्चालन गर्दा यसलाई सहयोग पुऱ्याउन अनुगमन एवम् मूल्याङ्कन प्रणाली सक्षम र सुदृढ हुनु अत्यावश्यक छ। यो कार्यक्रमको सञ्चालनको अवस्थामा सहभागितामूलक अनुगमन प्रणाली आवश्यक हुन्छ भने तेस्रो पक्षद्वारा अनुगमनसमेत गर्न सकिन्छ।

निष्कर्ष

नेपालको चिकित्सा शिक्षा विधामा थप धारको रूपमा स्नातकोत्तर र सोभन्दा माथिल्लो तह वा सो सरहको शिक्षाको लागि स्पेसियालिटी र सब-स्पेसियालिटी तहको अध्ययन अध्यापनका लागि पूर्व तयारीका कार्यहरू भइरहेका छन्। तयारीका कार्य सँगसँगै शैक्षिक कार्यक्रम सञ्चालन गर्न गराउन इच्छुक स्वास्थ्य संस्था र अस्पतालहरूमा यो तहको कार्यक्रम सञ्चालन निकट भविष्यमा नै सुरु हुनेछ।

यस पद्धतिमा विद्यार्थी आवासीय चिकित्सकको रूपमा नै रहन्छन्। विद्यार्थीलाई कार्यविधि बमोजिम तोकिएको पारीश्रमिक अस्पताल/संस्थाले उपलब्ध गराउनेछ। यसरी मौजुदा भौतिक तथा प्राज्ञिक स्रोत साधनको समुचित प्रयोग गर्दै सेवाकै क्रममा थप विशिष्ट ज्ञाप सिप आर्जन गरी दक्ष चिकित्सक उत्पादन गर्ने कार्यमा स्पेसियालिटी र सब-स्पेसियालिटी कार्यक्रम महत्त्वपूर्ण हुने देखिएको छ। यसरी नेपालको सन्दर्भमा स्पेसियालिटी र सब स्पेसियालिटीको शैक्षिक कार्यक्रमलाई कोशे ढुङ्गा हुने अपेक्षा गरिएको छ। मेडिकल कलेजको अलावा अस्पतालहरूमा पठनपाठन हुने अस्पतालको लागि विद्यार्थीहरू चिकित्सकको रूपमा अध्ययन र क्लिनिकल कार्य गर्ने हुँदा जनशक्ति वृद्धि हुने, गुणस्तरीय सेवा प्राप्त हुने, उच्च दक्ष जनशक्ति उत्पादन बढ्ने, नेपाली जनताले विशेषज्ञ डाक्टरको सेवा प्राप्त गर्ने हुँदा नेपालको चिकित्सा शिक्षा प्रणालीमा स्पेसियालिटी र सब-स्पेसियालिटी प्रणालीलाई अति महत्त्वपूर्ण पद्धतिको रूपमा स्थाथित गर्न सकिने देखिन्छ।

सन्दर्भ सामग्री:

१. नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिज कार्यक्रम सञ्चालन कार्यविधि, २०७७
२. राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७७ र नियमावली, २०७७
३. चिकित्सा शिक्षा सम्बन्धी स्रोत सामग्री, २०७६
४. चिकित्सा शिक्षा जर्नल, वर्ष १ अङ्क १, २०७७

चिकित्सा शिक्षासम्बन्धी मौजुदा नीतिगत व्यवस्था र एकीकृत राष्ट्रिय चिकित्सा शिक्षा नीतिको आवश्यकता

✍ विष्णुप्रसाद अधिकारी

उपसचिव, चिकित्सा शिक्षा आयोग, सानोठिमी भक्तपुर ।

लेखसार

राज्यद्वारा व्यक्त अठोट, सरकारका प्रतिबद्धता कार्यान्वयन गर्न आवश्यक कार्य प्रक्रियाको मार्गदर्शन, विधि र प्रक्रिया आदि लाई नीतिका रुपमा लिइन्छ । सरकारले जनताप्रतिको चिकित्सा शिक्षासम्बन्धी उत्तरदायित्व र जिम्मेवारी पूरा गर्ने क्रममा गरेका अठोट, प्रतिवद्धता, प्रयास वा घोषणालाई नीति मान्ने गरिएको छ । चिकित्सा शिक्षामा पहुँच, अवसर, सान्दर्भिकता र गुणस्तर अभिवृद्धिका निम्ति सरकारी क्षेत्रबाट प्रस्तावित सबै योजना र कार्यक्रम चिकित्सा शिक्षा नीतिकै अङ्गअन्तर्गत नै पर्छन् । देशको विकासका लागि आवश्यक चिकित्सा सम्बन्धी जनशक्ति उत्पादन कार्यलाई गुणस्तरीय र प्रभावकारी बनाउन र गुणस्तरीय स्वास्थ्य सेवा प्रवाहको प्रत्याभूति प्रदान गर्नका लागि चिकित्सा शिक्षा सम्बन्धी नीति आवश्यक हुन्छन् ।

यसै परिवेश र सन्दर्भलाई हृदयङ्गम गरी चिकित्सा शिक्षाको क्षेत्रमा केही नीतिगत, कानुनी, संरचनागत तथा कार्यक्रमगत व्यवस्थाहरू भएका छन् । चिकित्सा शिक्षामा लामो समयदेखि विभिन्न प्रकारका प्रयत्न र प्रयास भएका छन् । जस्तै संवैधानिक प्रावधान, चिकित्सा सम्बन्धी ऐन, नियमका साथै राष्ट्रिय शिक्षा नीति २०७६, स्वास्थ्य नीति, २०७६, आवधिक योजना तथा कार्यक्रमका मभध्यमबाट नीतिगत मार्गदर्शन गर्ने प्रयास भए पनि यी मौजुदा नीतिहरू समग्र शिक्षा र स्वास्थ्य क्षेत्रमा केन्द्रित छन् । त्यस्तै राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ जारी भई सोअनुसार चिकित्सा शिक्षा आयोग स्थापना भए पनि यो ऐन मूलतः नियमन तथा व्यवस्थापनसँग सम्बन्धित रहेको देखिन्छ । तसर्थ मोजुदा नीतिगत प्रावधानको कार्यान्वयनको अनुभवसमेतका आधारमा समग्र चिकित्सा शिक्षाका विभिन्न पक्ष र आयामका बारेमा स्पष्ट नीतिगत व्यवस्था गर्न राष्ट्रिय चिकित्सा शिक्षा नीति आवश्यक हुन गएको छ ।

१. नीतिको परिचय

नीतिको अर्थ र परिचय

नीति के हो भन्ने बारेमा विभिन्न मतमतान्तरहरू पाइन्छन् । नीतिको शाब्दिक अर्थ खोज्दा संस्कृत शब्दकोशले नीतिको संरचनागत अर्थ दिँदै 'नी' भनेको नेता र नीति भनेको नेताको निर्देशन मार्गदर्शन हो भनेको छ । त्यस्तै प्रयोगात्मक नेपाली शब्दकोशले नीति - नीत + इ अर्थात् 'नीत' भनेको ग्रहण गरिएको, ल्याइएको र 'इ' भनेको इच्छा, चाहना, कामना पूरा गर्न ल्याइएको अर्थात् सम्बन्धित व्यक्ति, समूहको इच्छा, चाहना पूरा गर्न ल्याइएको वा ग्रहण गरिएको भन्ने अर्थ दिएको पाइन्छ । बृहत् नेपाली शब्दकोशले नीतिलाई सरकार वा सङ्घ संस्थाले कार्य सञ्चालनका लागि गरेका प्रक्रिया, विधि वा मान्यता भनेर अर्थ्याएको छ ।

नीतिलाई सङ्कुचित र विस्तृत रूपमा पनि अर्थ्याउने गरिन्छ । नीतिलाई कुनै कार्य गर्न हुने वा नहुने भनेर दिइएको निर्देशन वा कुनै कार्य गर्न बनाइएको कार्य योजना, मार्गदर्शन तथा कुनै कार्य गर्न तय गरिएको बाटो र मार्गचित्र र सरकारद्वारा जारी कानुनी व्यवस्था वा प्रावधानका रूपमा लिनु सङ्कुचित अर्थ हो । तर राज्य सञ्चालनको मुख्य मान्यता, मार्गदर्शन राज्य सञ्चालनकर्ता र निकायका निर्णय र आदेश वा सरकारले जनताप्रतिको दायित्व पूरा गर्ने क्रममा अवलम्बित विचार, धारणा, सिद्धान्त वा पद्धति अर्थात् राज्यका कार्य र गतिविधिलाई निर्देशित गर्ने घोषणा, अवधारणा वा विधिसम्मत वृहत् मार्गदर्शनका रूपमा नीतिलाई विस्तृत अर्थका रूपमा लिइन्छ ।

यसरी (i) सार्वजनिक हित प्रवर्द्धन र जनताका आवश्यकता परिपूर्तिका लागि सरकारद्वारा घोषित प्रतिबद्धता र अठोट अर्थात् सरकारको लक्ष्य तथा उद्देश्य प्राप्तिको प्रतिबद्धता, ती प्राप्त गर्ने साधन वा तरिका (ii) उद्देश्य र कार्यक्रमबिचको सेतु (iii) राज्य र जनताबिचको सेतु (iv) शासन व्यवस्था सञ्चालनका विधि प्रक्रिया, अठोट घोषणा र वृहत्तर राष्ट्रिय मार्गदर्शनलाई नीतिका रूपमा लिइन्छ ।

चिकित्सा शिक्षा नीतिको परिचय

चिकित्सा शिक्षा सम्बन्धी शैक्षिक उद्देश्य हासिल गर्नका निम्ति के, किन, कसरी, कहिले गर्ने सम्बन्धी कार्यको रूपरेखाको समष्टि नै चिकित्सा शिक्षा नीति हुन् । चिकित्सा शिक्षा सम्बन्धमा राज्यद्वारा व्यक्त अठोट, सरकारका प्रतिबद्धता कार्यान्वयन गर्न आवश्यक कार्य प्रक्रियाको मार्गदर्शन, विधि र प्रक्रिया चिकित्सा शिक्षाका शैक्षिक नीति हुन् । चिकित्सा शिक्षाका सरकारी प्रतिबद्धता पूरा गर्न अवलम्बन गरिएका धारणा, सिद्धान्तका साथै सरकारी निर्णय, आदेशहरू पनि चिकित्सा क्षेत्रका शैक्षिक

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नीतिभित्र पर्छन् । यसरी चिकित्सा शिक्षामा देखिएका समस्या समाधान र जनताका आवश्यकता पूरा गर्न सरकारद्वारा घोषित अठोट वा प्रतिबद्धतालाई चिकित्सा शिक्षाका नीतिका रूपमा लिन सकिन्छ । यस्ता नीतिले सरकारको कार्यव्यवहार प्रदर्शन गर्नुका साथै सरकारले के गर्न चाहेको छ भन्ने कुरा स्पष्ट गर्छ । नीतिहरू सरकारको योजना, कार्यक्रम, रणनीतिका रूपमा आउने गर्छन् ।

समग्रमा भन्नुपर्दा चिकित्सा शिक्षाको सम्पूर्ण पक्षलाई मार्गनिर्देशन गर्ने दस्तावेज चिकित्सा शिक्षाका नीति हो । के गर्ने, के नगर्ने भनेर चिकित्सा शिक्षा विकासका निम्ति सरकारद्वारा तय गरिएका शैक्षिक कार्यक्रम, लक्ष्य तथा प्रतिफल निर्दिष्ट गर्ने मार्गदर्शन नै चिकित्सा शिक्षा नीति हुन् ।

२. चिकित्सा शिक्षा सम्बन्धी मौजुदा नीतिगत व्यवस्थाहरू

चिकित्सा शिक्षा सम्बन्धमा राज्यद्वारा व्यक्त अठोट तथा प्रतिबद्धता एवं तिनलाई पूरा गर्न अवलम्बन गरिएका ऐन, कानुन, सरकारी निर्णय, आदेशहरू लगायत चिकित्सा शिक्षामा देखिएका समस्या समाधान गर्न सरकारका योजना, कार्यक्रम आउने गर्छन् । चिकित्सा शिक्षामा सरकारले जनताप्रतिको उत्तरदायित्व र जिम्मेवारी पूरा गर्ने क्रममा अगाडि सारेका योजना र कार्यक्रम पनि शैक्षिक नीतिकै अङ्गअन्तर्गत नै पर्छन् । यसरी हेर्दा राष्ट्रिय र अन्तर्राष्ट्रिय रूपमा राज्यले गरेका सन्धि, सम्झौता, प्रतिबद्धताहरू, संविधान, ऐन, कानुन, संसद/विधायिका र मन्त्रिपरिषद्का निर्णय र निर्देशनहरू, विभिन्न निर्देशनात्मक आदेश र नजिरहरू, छरिएर रहेका सम्बन्धित क्षेत्रका प्रतिवेदनहरू, दस्तावेजहरू, दीर्घकालीन योजना, आवधिक योजना तथा कार्यक्रम, वार्षिक नीति तथा कार्यक्रम र बजेट, नीतिगत निर्णय आदि प्रत्यक्ष अप्रत्यक्ष रूपमा नीति कै स्वरूप मानिन्छ । यस दृष्टिकोणले यहाँ चिकित्सा शिक्षा सम्बन्धी मौजुदा नीतिका बारेमा प्रकाश पार्ने प्रयास गरिएको छ ।

२.१ संविधानद्वारा प्रदत्त शिक्षासम्बन्धी मौलिक हकहरू

राज्यको स्वरूप, गठन, कार्यक्षेत्र तथा अधिकारका साथै राज्य व्यवस्था सञ्चालन गर्ने कार्यविधि स्पष्ट उल्लेख गरिएको देशको मूल कानुन संविधान हो । नेपालको वर्तमान संविधान, २०७२ ले विभिन्न मौलिक हकका साथै राज्यका निर्देशक सिद्धान्त र नीतिको व्यवस्था गरेको छ । यस संविधानमा भाग ३ मा धारा १६ देखि धारा ४६ सम्म शिक्षा र स्वास्थ्यलगायतका ३१ ओटा मौलिक हकको व्यवस्था गरिएको छ । साथै यी मौलिक हकको कार्यान्वयनका लागि राज्यले ३ वर्षभित्र कानुनी व्यवस्था गर्नुपर्ने व्यवस्था पनि सुनिश्चित गरिएको छ । त्यसैले यो संविधानद्वारा प्रदत्त मौलिक हक कार्यान्वयनका लागि आवश्यक व्यवस्था गर्नु राज्यको प्रमुख दायित्व हुन गएको देखिन्छ । नीतिका लागि मार्गदर्शक हुने भएकाले यहाँ शिक्षा र स्वास्थ्य सम्बन्धी मौलिक हकहरू उल्लेख गरिएको छ ।

धारा ३५. स्वास्थ्य सम्बन्धी हक :

उपधारा (१) प्रत्येक नागरिकलाई राज्यबाट आधारभूत स्वास्थ्य सेवा निःशुल्क प्राप्त गर्ने हक हुनेछ र कसैलाई पनि आकस्मिक स्वास्थ्य सेवाबाट वञ्चित गरिने छैन ।

उपधारा (२) प्रत्येक व्यक्तिलाई आफ्नो स्वास्थ्य उपचारको सम्बन्धमा जानकारी पाउने हक हुनेछ ।

उपधारा (३) प्रत्येक नागरिकलाई स्वास्थ्य सेवामा समान पहुँचको हक हुनेछ ।

उपधारा (४) प्रत्येक नागरिकलाई स्वच्छ खानेपानी तथा सरसफाइमा पहुँचको हक हुनेछ ।

अन्य मौलिक हकमा शिक्षा र स्वास्थ्य सम्बन्धी व्यवस्था

१. बालबालिकाको हक (धारा ३९) : प्रत्येक बालबालिकालाई परिवार तथा राज्यबाट शिक्षा, स्वास्थ्य, पालन पोषण, उचित स्याहार, खेलकुद, मनोरञ्जन तथा सर्वाङ्गीण व्यक्तित्व विकासको हक हुनेछ ।

२. दलितको हक (धारा ४०) : दलित विद्यार्थीलाई प्राथमिकदेखि उच्च शिक्षासम्म कानुनबमोजिम छात्रवृत्तिसहित निःशुल्क शिक्षाको व्यवस्था गरिनेछ । प्राविधिक र व्यावसायिक उच्च शिक्षामा दलितका लागि कानुनबमोजिम विशेष व्यवस्था गरिनेछ ।

३. सामाजिक न्यायको हक (धारा ४२) : आर्थिक रूपले विपन्न तथा लोपोन्मुख समुदायका नागरिकको संरक्षण, उत्थान, सशक्तीकरण र विकासका लागि शिक्षा, स्वास्थ्य, आवास, रोजगारी, खाद्यान्न र सामाजिक सुरक्षामा विशेष अवसर तथा लाभ पाउने हक हुनेछ ।

धारा ४७. मौलिक हकको कार्यान्वयन : यस भाग (भाग ३) द्वारा प्रदत्त हकहरूको कार्यान्वयनका लागि आवश्यकता अनुसार राज्यले यो संविधान प्रारम्भ भएको तीन वर्षभित्र कानुनी व्यवस्था गर्नेछ ।

२. संविधानद्वारा प्रदत्त शिक्षासम्बन्धी नीतिहरू

राज्यका नीति अन्तर्गत "नागरिकका आधारभूत आवश्यकता सम्बन्धी नीति"मा शिक्षा र स्वास्थ्य सम्बन्धी नीतिहरू उल्लेख गरिएका छन् । उक्त नीतिमा शिक्षासम्बन्धी नीतिगत व्यवस्था यसप्रकार छन् :

(ज) नागरिकका आधारभूत आवश्यकता सम्बन्धी नीति :

नीति नं १. शिक्षालाई वैज्ञानिक, प्राविधिक, व्यावसायिक, सिपमूलक, रोजगारमूलक एवं जनमुखी बनाउँदै सक्षम, प्रतिस्पर्धी, नैतिक एवं राष्ट्रिय हितप्रति समर्पित जनशक्ति तयार गर्ने,

नीति नं २. शिक्षा क्षेत्रमा राज्यको लगानी अभिवृद्धि गर्दै शिक्षामा भएको निजी क्षेत्रको लगानीलाई नियमन र व्यवस्थापन गरी सेवामूलक बनाउने,

नीति नं ३. उच्च शिक्षालाई सहज, गुणस्तरीय र पहुँच योग्य

बनाई क्रमशः निःशुल्क बनाउँदै लैजाने,

नीति नं ५. नागरिकलाई स्वस्थ बनाउन राज्यले जनस्वास्थ्यको क्षेत्रमा आवश्यक लगानी अभिवृद्धि गर्दै जाने,

नीति नं ६. गुणस्तरीय स्वास्थ्य सेवामा सबैको सहज, सुलभ र समान पहुँच सुनिश्चित गर्ने,

नीति नं ७. नेपालको परम्परागत चिकित्सा पद्धतिको रूपमा रहेको आयुर्वेदिक, प्राकृतिक चिकित्सा र होमियोपेथिक लगायत स्वास्थ्य पद्धतिको संरक्षण र प्रवर्धन गर्ने,

नीति नं ८. स्वास्थ्य क्षेत्रमा राज्यको लगानी अभिवृद्धि गर्दै यस क्षेत्रमा भएको निजी लगानीलाई नियमन र व्यवस्थापन गरी सेवामूलक बनाउने,

नीति नं ९. स्वास्थ्य सेवालाई सर्वसुलभ र गुणस्तरीय बनाउन स्वास्थ्य अनुसन्धानमा जोड दिदै स्वास्थ्य संस्था र स्वास्थ्यकर्मीको संख्या वृद्धि गर्दै जाने,

नीति नं १०. नेपालको क्षमता र आवश्यकताका आधारमा जनसंख्या व्यवस्थापनका लागि परिवार नियोजनलाई प्रोत्साहित गर्दै मातृ शिशु मृत्युदर घटाई औसत आयु बढाउने,

नीति नं १५. नागरिकको स्वास्थ्य बीमा सुनिश्चित गर्दै स्वास्थ्य उपचारमा पहुँचको व्यवस्था मिलाउने ।

(ञ) सामाजिक न्याय र समावेशीकरण सम्बन्धी नीति :

नीति नं ३. प्रजनन अवस्थामा आवश्यक सेवा सुविधा उपभोगको सुनिश्चितता गर्ने,

नीति नं ७. राष्ट्रिय विकासमा युवा सहभागिता अभिवृद्धि गर्दै राजनीतिक, आर्थिक, सामाजिक र सांस्कृतिक अधिकारहरूको पूर्ण उपयोगको वातावरण सिर्जना गर्ने, युवाको सशक्तीकरण र विकासका लागि शिक्षा, स्वास्थ्य, रोजगारी लगायतका क्षेत्रमा विशेष अवसर प्रदान गर्दै व्यक्तित्व विकास गर्ने तथा राज्यको सर्वाङ्गीण विकासमा योगदानका लागि उपयुक्त अवसर प्रदान गर्ने,

नीति नं १२. सामाजिक सुरक्षा र सामाजिक न्याय प्रदान गर्दा सबै लिंग, क्षेत्र र समुदायभित्रका आर्थिक रूपले विपन्नलाई प्राथमिकता प्रदान गर्ने,

२.२ राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ मा भएको नीतिगत व्यवस्था

चिकित्सा शिक्षाको क्षेत्रमा राज्यको लगानी अभिवृद्धि गर्दै चिकित्सा शिक्षालाई नेपालको राष्ट्रिय आवश्यकताअनुरूप विकास गरी चिकित्सा शिक्षाको नियमनलाई एकीकृत तथा चुस्त बनाउन, चिकित्सा शिक्षासम्बन्धी शिक्षण संस्थाको स्थापना र सञ्चालनसम्बन्धी कार्यलाई व्यवस्थित गर्न तथा चिकित्सा शिक्षामा गुणस्तर, पेसाधर्मिता, संस्थागत जवाफदेहिता, भौगोलिक सन्तुलन र सामाजिक न्याय कायम गरी विपन्न लगायत सबै विद्यार्थीहरूको समान पहुँच सुनिश्चित गर्नका लागि चिकित्सा शिक्षा सुधार गर्ने सम्बन्धमा विभिन्न समयमा गठित आयोग, समिति तथा कार्यदलको प्रतिवेदनको मर्म र भावनासमेतलाई दृष्टिगत गरी चिकित्सा शिक्षा आयोगको स्थापना तथा सञ्चालन गर्ने सम्बन्धमा व्यवस्था गर्न राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ जारी भएको छ ।

राष्ट्रिय चिकित्सा ऐन, २०७५ मा भएको मुख्य नीतिगत व्यवस्था

१. शिक्षण संस्थाको नियमन गर्न तथा चिकित्सा शिक्षालाई गुणस्तरीय बनाउनका लागि प्रधानमन्त्री अध्यक्ष, शिक्षा र स्वास्थ्य सम्बन्धी मन्त्री सहअध्यक्ष, चिकित्सा क्षेत्रमा विशिष्ट योगदान पुर्‍याएका चिकित्सकहरूमध्येबाट नेपाल सरकारले नियुक्ति गरेको एकजना उपाध्यक्ष, शिक्षा र स्वास्थ्य सम्बन्धी मन्त्री सचिवहरू, चिकित्सा शिक्षा सञ्चालन भएका विश्वविद्यालयका उपकुलपतिहरू, विश्वविद्यालय अनुदान आयोगका अध्यक्ष, चिकित्सा शिक्षा सम्बन्धी विषयगत परिषद र काउन्सिलका प्रतिनिधिलगायत अन्य विज्ञसमेत सदस्य रहेको चिकित्सा शिक्षा आयोग गठन स्थापना गरिएको छ । राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ को दफा ६ मा चिकित्सा शिक्षा आयोगको काम, कर्तव्य र अधिकार निम्नानुसार हुने व्यवस्था रहेको छ :

(क) चिकित्सा शिक्षाको क्षेत्रमा अवलम्बन गर्नुपर्ने राष्ट्रिय नीति तय गर्ने,

(ख) सङ्घ तथा प्रदेश तहका चिकित्सा शिक्षाको सबै तह तथा विधाको मापदण्ड र स्तरसम्बन्धी नीति तथा मापदण्ड निर्धारण गर्ने,

(ग) एकीकृत प्रवेश परीक्षा (कमन इन्ट्रान्स) सञ्चालनका लागि नीति तथा मापदण्ड निर्धारण गर्ने,

(घ) प्रत्यायनसम्बन्धी नीति, आधार तथा मापदण्ड निर्धारण गर्ने,

(ङ) प्राज्ञिक उन्नयन तथा अनुसन्धानसम्बन्धी नीति निर्धारण गर्ने,

(च) चिकित्सा शिक्षाको विषयमा सम्बन्धित विश्वविद्यालय, प्रतिष्ठान र परिषद्लाई आवश्यकताअनुसार निर्देशन दिने,

(छ) नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिजका लागि प्रत्यायनका आधार स्वीकृत गर्ने,

(ज) आशय पत्र, सम्बन्धन र सम्बन्धन खारेजीसम्बन्धी नीति र मापदण्ड तय गर्ने,

(झ) नेसनल बोर्ड अफ मेडिकल स्पेसियालिटिजले लिएको परीक्षामा उत्तीर्ण हुने चिकित्सकलाई उपाधि प्रदान गर्ने,

(ञ) शिक्षण संस्था स्थापनाका लागि नक्साङ्कन स्वीकृत गर्ने र तोकिएबमोजिमका अन्य कार्य गर्ने ।

२. ऐनमा चिकित्सा शिक्षासम्बन्धी शिक्षण संस्था स्थापना गर्न आशय पत्र, सम्बन्धन र प्रत्यायन, नियमन, अनुगमन, निर्देशनसम्बन्धी कार्य गर्ने जिम्मेवारी चिकित्सा शिक्षा

आयोगलाई प्रदान गरिएको ।

३. ऐनमा चिकित्सा शिक्षाको उच्च तहमा अध्ययन गर्न भर्ना हुनका लागि चिकित्सा शिक्षा आयोगले सञ्चालन गरेको प्रवेश परीक्षा उत्तीर्ण गरेको हुनुपर्ने व्यवस्था गरिएको । यसका लागि आयोगले पाठ्यक्रम र शैक्षिक क्यालेन्डर तथा सिट निर्धारणसम्बन्धी कार्य गर्ने व्यवस्था गरिएको ।

४. चिकित्सा शिक्षाको उच्च शिक्षातर्फको शिक्षण शुल्क निर्धारण गर्ने जिम्मेवारी चिकित्सा शिक्षा आयोगलाई प्रदान गरिएको ।

५. विश्वविद्यालय, प्रतिष्ठान तथा अन्य शिक्षण संस्थाको चिकित्सा शिक्षासम्बन्धी पाठ्यक्रम, शिक्षण विधि र उपाधिको मापदण्ड आयोगले निर्धारण गरेवमोजिम हुने व्यवस्था गरिएको ।

६. विश्वविद्यालय, प्रतिष्ठान तथा अन्य शिक्षण संस्थाले आयोगले तोकेवमोजिमको चिकित्सा शिक्षा सम्वद्ध प्राध्यापक, सहप्राध्यापक तथा उपप्राध्यापकको न्यूनतम योग्यता र अनुभव तोक्ने व्यवस्था रहेको ।

७. ऐनले चिकित्सा शिक्षासम्बन्धी विश्वाविद्यालय, प्रतिष्ठान र काउन्सिल वा शिक्षण संस्थाको निरीक्षण गर्ने, पदाधिकारी छनोटका आधारमा, नयाँ शैक्षिक कार्यक्रम सञ्चालनका लागि प्रोत्साहन, छात्रावृत्तिमा अध्ययन गर्ने विद्यार्थीको कवुलियलनामा, शैक्षिक ऋण, विद्यार्थी तथा शिक्षकको आचरण, प्रमाणपत्र तहको कार्यक्रम सञ्चालन नहुने, अस्पताल सञ्चालनका मापदण्ड, शिक्षाण संस्था गाभ्ने, चिकित्सकले कार्यालय समयमा अन्यत्र काम गर्न नहुने लगायत विषय क्षेत्रमा स्पष्ट गरेको छ ।

निर्धारितभन्दा बढी शुल्क लिएमा सिट सङ्ख्या सम्बन्धी मापदण्ड उल्लङ्घन गरेमा र ऐनबमोजिम निर्धारित मापदण्ड पूरा नगरेमा आयोगले चिकित्सा शिक्षा सम्बन्धी शिक्षण संस्था वा सो संस्थाका कुनै शैक्षिक कार्यक्रमको सम्बन्धन खारेज गर्न विश्वविद्यालयलाई लेखी पठाउन सक्ने जस्ता अधिकारसमेत प्रदान गरिएको अवस्था छ । त्यस्तै यो ऐन प्रारम्भ भएको १० वर्षपछि नेपाल राज्यभित्र सञ्चालित चिकित्सा सम्कन्धी शिक्षण संस्था क्रमशः गैरनाफामूलक र सेवामूलक संस्थाका रुपमा रहने व्यवस्था गरिएको छ ।

२.३ राष्ट्रिय चिकित्सा शिक्षा नियमावली, २०७७ मा भएको नीतिगत व्यवस्था

राष्ट्रिय चिकित्सा ऐन, २०७५ कार्यान्वयन गर्नका लागि नेपाल सरकारले आयोगसँग परामर्श गरी आवश्यक नियम बनाउन सक्ने प्रावधानबमोजिम उक्त ऐनको दफा ५४ ले दिएको अधिकार प्रयोग गरी चिकित्सा शिक्षा नियमावली, २०७७ जारी भएको हो । उक्त प्रावधानबमोजिम मिति २०७७।४।२६ देखि लागु हुने गरी उक्त नियमावली जारी भएको हो । उक्त नियमावलीमा भएका केही प्रमुख व्यवस्था यस प्रकार रहेका छन् :

१. ऐनमा उल्लेख भएवाहेक चिकित्सा शिक्षा आयोग, कार्यकारी समिति, उपाध्यक्ष र सदस्य सचिवको काम, कर्तव्य र अधिकारमा थप प्रस्ट गरिएको

२. चिकित्सा शिक्षा सञ्चालन गर्न चाहने शैक्षिक संस्थाका लागि आशयपत्र, सम्बन्धन र खारेजीसम्बन्धी कार्य प्रक्रिया समावेश गरिएको

३. चिकित्सा शिक्षासम्बन्धी शैक्षिक कार्यक्रम सञ्चालन गर्ने विश्वविद्यालय, प्रतिष्ठान र अन्य शिक्षण संस्थाको तहगत र विषयगत सिट संख्या निर्धारणसम्बन्धी कार्य प्रक्रिया उल्लेख गरिएको

४. एकीकृत प्रवेश परीक्षा सञ्चालन सम्बन्धमा परीक्षा सञ्चालन प्रक्रिया, एकीकृत प्रवेश परीक्षा समितिको व्यवस्था, योग्यताक्रमको सूची प्रकाशन, स्नातकोत्तर तहमा विद्यार्थी छनोट लगायतका कार्य प्रक्रिया व्यवस्थित गरिएको

५. नियमावलीमा विद्यार्थी भर्ना, शुल्क निर्धारण तथा छात्रवृत्तिको कोटा निर्धारण सम्बन्धी व्यवस्था स्पष्ट गरिएको

६. चिकित्सा शिक्षाका विभिन्न तह र विषयको मूल पाठ्यक्रम, शिक्षण विधि र उपाधिसम्बन्धी आयोगले स्वीकृत गरेको मापदण्डको अधीनमा रही विश्वविद्यालय वा प्रतिष्ठानले आफ्नो पाठ्यक्रम, शिक्षण विधि र उपाधि निर्धारण गर्नुपर्ने व्यवस्था गरिएको ।

७. प्रत्यायनसम्बन्धी कार्य गर्नका लागि छुट्टै निकाय गठन नभएसम्म प्रत्यायनसम्बन्धी काम मापदण्ड तथा प्रत्यायन निर्देशनालयलाई प्रत्यायनसम्बन्धी कार्यमा सहयोग पुर्‍याउन चिकित्सा शिक्षा प्रत्यायन समितिको गठन गरिएको

८. नेशनल बोर्ड अफ मेडिकल स्पेसियालिटिजको गठन र काम, कर्तव्य र अधिकार समावेश गरिएको

९. चिकित्सा शिक्षासम्बन्धी कार्यक्रम सञ्चालन गर्ने शिक्षण संस्थाको जवाफदेहिता र दायित्व उल्लेख गरिएको ।

१०. शिक्षण संस्था सञ्चालन गर्ने पदाधिकारी जस्तै विश्वविद्यालय तथा प्रतिष्ठानका उपकुलपति, रजिष्ट्रार, रेक्टर, डीन, सहायक डीन र व्यवस्थापकको आचरणका साथै शिक्षक, प्रशिक्षक तथा कर्मचारी र विद्यार्थीहरूले पालना गर्नुपर्ने आचारसंहिताको व्यवस्था गरिएको ।

११. आयोगले स्वीकृत गरेको मापदण्डबमोजिम कुनै विश्वविद्यालयअन्तर्गतका दुई वा सोभन्दा बढी शिक्षण संस्था गाभिन चाहेमा सम्बन्धित विश्वविद्यालयले गाभ्न सक्ने व्यवस्था गरिएको ।

१२. प्रत्येक विश्वविद्यालय, प्रतिष्ठान वा अन्य शिक्षण संस्थाले स्वास्थ्यसम्बन्धी विषय हेर्ने नेपाल सरकारको मन्त्रालयले तोकेको कम्तीमा एक जिल्लामा समुदायमूलक शिक्षा तथा चिकित्सा सेवा प्रदान गर्नु पर्ने व्यवस्था गरिएको ।

१३. आयोगको कार्यकारी समितिले चिकित्सा शिक्षाका कार्यक्रम सञ्चालन गर्ने विश्वविद्यालय, प्रतिष्ठान र शिक्षण संस्थाको

प्रशासनिक र प्राविधिक लगायतका विषयमा अनुगमन गर्न वा गराउन सक्ने व्यवस्था रहेको ।

१४. चिकित्सा शिक्षा प्रदान गर्ने शिक्षण संस्थालाई "क", "ख" र "ग" गरी तीन श्रेणीमा वर्गीकरण गर्ने आधार निर्धारण गरिएको

१५. शिक्षासम्बन्धी विषय हेर्ने नेपाल सरकारको मन्त्रालयले नेपाल राजपत्रमा सूचना प्रकाशन गरी नियमावलीका अनुसूचीमा आवश्यकताअनुसार हेरफेर वा थपघट गर्न सक्ने व्यवस्था रहेको ।

यसरी यस नियमावलीले चिकित्सा शिक्षा ऐन कार्यान्वयनका लागि विभिन्न व्यवस्था गरेर मार्गप्रशस्त गर्ने कार्य गरेको छ ।

२.४ राष्ट्रिय शिक्षा नीति, २०७६

राष्ट्रिय शिक्षा नीति, २०७६ ले चिकित्सा शिक्षा सम्बन्धमा देहायका नीति तथा कार्यनीति लिएको छ :

नीति १. चिकित्सा शिक्षालाई सेवामूलक तथा गैरनाफामूलक बनाउन गुणस्तरीय, विवेकशील तथा सामाजिक दायित्वबोध भएका चिकित्साकर्मीहरूको उत्पादन गर्न चिकित्सा शिक्षा आयोगको सुदृढीकरण गर्ने र चिकित्सा शिक्षामा सक्षमतामा आधारित (Competency based) पाठ्यक्रम लागू गर्ने ।

कार्यनीति

१. चिकित्सा शिक्षा सम्बन्धी सम्पूर्ण संस्था तथा कार्यक्रमहरू संघीय सरकारको शिक्षा सम्बन्धी विषय हेर्ने मन्त्रालयको समन्वयमा सञ्चालन गर्ने व्यवस्था मिलाउनुका साथै चिकित्सा शिक्षा आयोगको नियमन, नेतृत्व र निर्देशनमा गुणस्तर कायम गराइनेछ । चिकित्सा शिक्षा सम्बन्धी प्रतिष्ठानहरूलाई एकीकृत प्रतिष्ठानका रूपमा सञ्चालन गर्न आवश्यक कानुनी प्रवन्ध गरिने छ ।

२. चिकित्सा शिक्षाको पाठ्यक्रम र शिक्षण सिकाइ प्रक्रियामा विद्यार्थीको सृजनशीलता तथा समस्याको विश्लेषण क्षमता, सहकार्य सिप, कार्य कौशल, समस्या समाधान सिप आदिमा जोड दिइनेछ । सोको वास्तविक मूल्याङ्कनका निम्ति मूल्याङ्कन प्रणालीमा सुधार तथा परिवर्तन गर्ने संस्कारको विकास गरिनेछ ।

३. पूर्वाधार पूरा गरेका स्वास्थ्य संस्थाहरूमा नेसनल बोर्ड अफ मेडिकल स्पेसियल्टिजको तत्वावधानमा स्नातकोत्तर चिकित्सा शिक्षाका कार्यक्रमहरू सञ्चालन गर्न अनुमति दिइनेछ ।

४. चिकित्सा शिक्षाको पाठ्यक्रमले नैतिक मूल्य मान्यता, सञ्चार सिप एवं समुदायप्रति दायित्वबोध गर्ने खालका विषयवस्तुसमेत समेट्नुपर्ने र शिक्षण अभ्यास तथा इन्टर्नसिपलाई वैज्ञानिक एवं सापेक्षिक बनाउन स्वास्थ्य शिक्षा प्रविधिको उच्चतम प्रयोग गर्ने व्यवस्था मिलाइनेछ ।

५. चिकित्सा शिक्षालगायत प्राविधिक विषयहरूमा सरकारले उपलब्ध गराएको छात्रवृत्तिमा अध्ययन गरेका विद्यार्थीहरूले अध्ययन पूरा गरेपश्चात् कानुन बमोजिमको अवधिभर अनिवार्य सेवा गर्नुपर्ने व्यवस्था मिलाइनेछ ।

६. चिकित्सा शिक्षा सम्बन्धी नयाँ संस्थाहरू स्थापना एवं सञ्चालन गर्दा भौतिक पूर्वाधार, जनशक्ति तथा आर्थिक व्यवस्थापनका साथै जनसंख्या र भौगोलिक सन्तुलनलाई समेत आधार बनाउनुपर्ने गरी कानुनी प्रबन्ध गरिनेछ ।

नीति २. आयुर्वेद चिकित्सा क्षेत्रमा स्वदेशमै विशेषज्ञ जनशक्तिको उत्पादन, औषधी उत्पादन र गुणस्तर अभिवृद्धि गर्न आयुर्वेद विश्वविद्यालय स्थापना गर्ने ।

कार्यनीति

१. आयुर्वेद अध्ययन अध्यापन गर्ने गरी छुट्टै विश्वविद्यालय स्थापना गरी यसको आंगिक कलेजको रूपमा माग र आवश्यकता अनुरूप प्रत्येक प्रदेशमा आयुर्वेद कलेज स्थापना गरिनेछ ।

२. स्वास्थ्यसँग सम्बन्धित संकायहरू जस्तैः इ-मेडिसिन, डेन्ट्रिस्ट, नर्सिङ, जनस्वास्थ्य र फार्मेसी विषय क्षेत्रका पाठ्यक्रममा आयुर्वेद सम्बन्धी विषयवस्तु समावेश गरी पठन पाठनको व्यवस्था गरिनेछ ।

२.५ स्वास्थ्य नीति, २०७६

देश संघीय शासन प्रणालीमा गइसकेकाले संघीय संरचनाको वस्तुगत धरातलमा आधारित रही गुणस्तरीय स्वास्थ्य सेवालाई सवै नागरिकको सर्वसुलभ पहुँचमा पुर्‍याउनु राज्यको दायित्व हो । यसै कुरालाई दृष्टिगत गरी हालसम्मका प्रयासहरूको पुनरावलोकन गर्दै गुणस्तरीय स्वास्थ्य सेवाको पहुँच विस्तार गर्ने विश्वव्यापी अभियानलाई निरन्तरता प्रदान गर्दै नेपालले पनि प्रतिवद्धता जाहेर गरेको छ ।

गुणस्तरीय स्वास्थ्य सेवामा नागरिकको संविधान प्रदत्त हक सुनिश्चित गर्न तथा नेपालले गरेका राष्ट्रिय तथा अन्तर्राष्ट्रिय प्रतिवद्धतालाई सम्वोधन गर्नका लागि नेपालले सहश्राव्दी विकास लक्ष्यहरूमा प्राप्त सफलतालाई कायम राख्दै दिगो विकासको लक्ष्य हासिल गर्ने अभिप्रायले यो नीति अगाडि सारिएको हो ।

यस नीतिमा उल्लिखित नीति र रणनीति उल्लेख गरिएको छ :

नीतिहरू

१. स्वास्थ्य सेवालाई सर्वसुलभ प्रभावकारी तथा गुणस्तरीय वनाउन जनसङ्ख्या, भूगोल र संघीय संरचना अनुरूप सिप मिश्रित दक्ष स्वास्थ्य जनशक्तिको विकास र विस्तार गर्दै स्वास्थ्य सेवालाई व्यवस्थित गरिने छ ।

२. सेवा प्रदायक व्यक्ति तथा संस्थाबाट प्रदान गरिने स्वास्थ्य सेवालाई प्रभावकारी, जवाफदेही र गुणस्तरीय बनाउन स्वास्थ्य व्यवसायी परिषदहरूको संरचनाको विकास, विस्तार तथा सुधार गरिने छ ।

३. स्वास्थ्य अनुसन्धानलाई अन्तर्राष्ट्रिय मापदण्ड अनुदान गुणस्तरीय बनाउँदै अनुसन्धानबाट प्राप्त प्रमाण र

तथ्यहरूलाई नीति निर्माण, योजना तर्जुमा तथा स्वास्थ्य पद्धतिको विकासमा प्रभावकारी उपयोग गरिने छ ।

४. स्वास्थ्य क्षेत्रमा सहकारी, निजी तथा गैरसरकारी क्षेत्रबिचको सहकार्य तथा साझेदारीलाई प्रवर्धन, व्यवस्थापन तथा नियमन गर्नुका साथै स्वास्थ्य शिक्षा सेवा र अनुसन्धानका क्षेत्रमा निजी, आन्तरिक तथा वाह्य लगानीलाई प्रोत्साहन एवं संरक्षण गरिने छ ।

५. आयुर्वेद, प्राकृतिक चिकित्सा, योग तथा होमियोप्याथिक लगायतका चिकित्सा प्रणालीलाई एकीकृत रूपमा विकास र विस्तार गरिनेछ ।

चिकित्सा शिक्षा सम्बद्ध रणनीतिहरु

(क) नीति : स्वास्थ्य सेवालाई सर्वसुलभ प्रभावकारी तथा गुणस्तरीय वनाउन जनसङ्ख्या, भूगोल र संघीय संरचना अनुरूप सिप मिश्रित दक्ष स्वस्थ्य जनशक्तिको विकास र विस्तार गर्दै स्वास्थ्य सेवालाई व्यवस्थित गरिने छ ।

यस नीति सम्बद्ध मुख्य रणनीतिहरू

१. संघीय संरचनाअनुरूप अल्पकालीन तथा दीर्घकालीन योजना बनाई आवश्यक स्वास्थ्य जनशक्तिको प्राप्ति, विकास तथा उपयोग गरिने छ ।

२. सम्वन्धित निकायहरूको सहकार्यमा एकीकृत राष्ट्रिय पाठयक्रम तयार गरी सबै तहका लागि आवश्यकताबमोजिम स्वस्थ्य जनशक्ति उत्पादन गरिने छ ।

३. सरकारी स्वास्थ्य संस्थाहरूमा कार्यरत चिकित्सक र स्वास्थ्यकर्मी एक मात्र स्वास्थ्य संस्थामा रही 'एक चिकित्सक र स्वास्थ्यकर्मी- एक स्वास्थ्य संस्था' को अवधारणालाई सबै सरकारी स्वस्थ्य संस्थाहरूमा क्रमशः लागू गरिने छ । यस अवधारणालाई प्रभावकारी रूपमा लागू गर्न तथा सेवाको पहुँच विस्तार गर्नका लागि सरकारी अस्पतालहरूमा आर्थिकलगायत अतिरिक्त सुविधासहितको विस्तारित अस्पताल सेवा (Extended hopital services) कार्यान्वयन गरिनेछ ।

४. सबै स्थानीय तहमा रहने प्राथमिक अस्पतालमा एक एमडीजीपी चिकित्सकीय सेवा रहने गरी आकस्मिक उपचार, ल्याब सेवा, फार्मेसी सेवा, नर्सिङ सेवा तथा जनस्वास्थ्य सेवाका लागि आवश्यक दरवन्दी सिर्जना गरी सेवा प्रवाह गरिने छ ।

५ स्वास्थ्य जनशक्तिहरूको क्षमता अभिवृद्धिका लागि उच्च शिक्षा अध्ययन, सेवाकालीन तालिम, निरन्तर पेसागत तालिम, पेसागत वृद्धि र विकासका लागि स्पष्ट मार्ग तथा अवसर प्रदान गर्नुका साथै पेसागत अनुसन्धानलाई प्रोत्साहन तथा प्रवर्धन गरिने छ ।

६. गुणस्तरीय स्वास्थ्य सेवाको लागि समयानुकूल विविध विधाहरू (मिडवाइफ, अस्पताल व्यवस्थापन, मेडिकल लिडरसिप, स्वास्थ्य अर्थशास्त्र आदि) मा विशिष्टीकृत जनशक्ति उत्पादनका लागि आवश्यक प्रबन्ध गरिने छ ।

७. स्वास्थ्य विज्ञान प्रतिष्ठानहरूको विकास तथा विस्तारका लागि एकीकृत छाता ऐन बनाई कार्यान्वयन गरिनेछ । शिक्षण जिल्लाको अवधारणालाई देशभरि लागू गरिनेछ ।

८. सबै तह र प्रकारका स्वास्थ्य संस्था तथा जनशक्तिहरूको सूचना प्रविधिमैत्री वैज्ञानिक अभिलेखीकरण गरी नियमित रूपमा अद्यावधिक गरिने छ ।

(ख) नीति : स्वास्थ्य क्षेत्रमा सहकारी, निजी तथा गैरसरकारी क्षेत्रबिचको सहकार्य तथा साझेदारीलाई प्रवर्धन, व्यवस्थापन तथा नियमन गर्नुका साथै स्वास्थ्य शिक्षा सेवा र अनुसन्धानका क्षेत्रमा निजी, आन्तरिक तथा वाह्य लगानीलाई प्रोत्साहन एवं संरक्षण गरिने छ ।

यस नीति सम्बद्ध मुख्य रणनीतिहरू

१. निजी क्षेत्रको व्यवसायिकता, कार्यकुशलता, उद्यमशीलता, प्राविधिक दक्षता एवं वित्तीय स्रोतलाई स्वास्थ्य सेवाको विकास तथा विस्तारमा उपयोग गर्दै, सामाजिक उत्तरदायित्व अभिवृद्धि गरिने छ ।

२. अस्पताल सञ्चालन स्वीकृतिको मापदण्ड सरकारी वा गैरसरकारी, निजी सबैको निम्ति समान र व्यवहारिक बनाइने छ । साथै, निजी अस्पतालहरूलाई उपत्यकाबाहिर ग्रामीण समुदायहरूमा स्थापनाका लगि प्रोत्साहन गर्नुका साथै अस्पताल तथा स्वास्थ्य संस्थाहरूले प्रदान गर्ने सेवाको नियमित प्रतिवेदनलाई अनिवार्य गर्दै प्रभावकारी अनुगमन तथा नियमन गरिने छ ।

३. गुणस्तरीय स्वास्थ्य सेवाको सर्वसुलभ पहुँच सुनिश्चित गर्न सबै तह र प्रकारका अस्पताल तथा स्वस्थ्य संस्थाहरूबाट दिइने उपचार तथा स्वस्थ्य सेवाको वर्गीकृत सुविधाका आधारमा शुल्क निर्धारण गरिनेछ ।

४. विशिष्टीकृत र अति विशिष्टीकृत स्वास्थ्य सेवाको विकास गर्दै सरकारी, निजी र गैरसरकारी क्षेत्रबीच सहकार्य गरी स्वास्थ्य पर्यटनको प्रवर्धन गरिने छ ।

(ग) नीति : आयुर्वेद, प्राकृतिक चिकित्सा, योग तथा होमियोप्याथिकलगायतका चिकित्सा प्रणालीलाई एकीकृत रूपमा विकास र विस्तार गरिने छ ।

यस नीति सम्बद्ध मुख्य रणनीतिहरू

१. स्थानीय स्तरमा उपलब्ध औषधीजन्य जडीबुटी, खनिज एवं जान्तव द्रव्यको पहिचान, संरक्षण, संकलन, प्रवर्धन गर्दै आयुर्वेद चिकित्सामा वैज्ञानिक अनुसन्धान तथा सदुपयोग गरी आत्मनिर्भरता अभिवृद्धि गरिने छ ।

२. प्रचलित तथा परम्परागत चिकित्सा सेवाहरूलाई निश्चित मापदण्डका आधारमा सूचीकृत, व्यवस्थित तथा नियमन गरिने छ ।

३. आयुर्वेद स्वास्थ विज्ञान प्रतिष्ठान र आयुर्वेद विश्वविद्यालयको स्थापना गरी आयुर्वेद विज्ञान र प्राकृतिक चिकित्सा

प्रणालीको अध्ययन, उपचार र अनुसन्धान गरिने छ ।

२.६ पन्ध्रौं योजनामा स्वास्थ्य (चिकित्सा शिक्षा)

नेपालको संविधानले प्रत्येक नागरिकलाई राज्यबाट आधारभूत स्वास्थ्य सेवा निःशुल्क प्राप्त गर्ने मौलिक हकको व्यवस्था गरेको छ। देश विकासमा स्वस्थ र उत्पादनशील नागरिकको महत्वलाई दृष्टिगत गरी यस क्षेत्रमा लगानी वृद्धिमार्फत् गुणस्तरीय तथा सर्वसुलभ स्वास्थ्य सेवामा समतामूलक पहुँच सुनिश्चित गर्नु राज्यको दायित्वका रूपमा लिँदै लोककल्याणकारी राज्यको अवधारणा अनुरूप स्वास्थ्य क्षेत्रलाई नाफामूलकबाट क्रमशः सेवामूलक क्षेत्रमा रूपान्तरण गदै लैजानु पर्ने आवश्यकता औल्याएको छ । यस योजनामा नेपालले विभिन्न समयमा गरेको अन्तर्राष्ट्रिय प्रतिबद्धता, नेपाल सरकारका विद्यमान नीति एवम् प्रमुख समस्या, चुनौती तथा अवसरलाई समेत आधार बनाउँदै दिगो विकास लक्ष्य हासिल गर्ने राष्ट्रिय कार्यसूची रहेको देखिन्छ । नागरिकलाई स्वस्थ बनाउन आधुनिक चिकित्सा, आयुर्वेदिक, प्राकृतिक, होमियोपेथिक चिकित्सा क्षेत्र, स्वास्थ्य सुशासन र अनुसन्धानमा लगानी बढाउन आवश्यक देखिएको छ । यस योजनामा स्वास्थ्य सेवालाई जनताको घरदैलोसम्मै पुर्‍याउन राज्यको नेतृत्वदायी र निजी तथा सहकारी क्षेत्रको परिपूरक भूमिका रहन कुरामा योजनाले जोड दिएको छ ।

(क) योजनाको सन् २१०० सम्मको दीर्घकालीन सोचमा स्वास्थ्य (चिकित्सा शिक्षा) सम्बन्धी व्यवस्था

१. दीर्घकालीन रणनीतिमाः सुलभ तथा गुणस्तरीय स्वास्थ्य सेवा र शिक्षाको सुनिश्चितता गर्ने उल्लेख
२. रूपान्तरणका प्रमुख संवाहकहरूः गुणस्तरीय मानव पुँजी निर्माणमा जोड दिइएको ।

(ख) राष्ट्रिय रणनीतिः

स्थानीय स्तरमा आधारभूत स्वास्थ्यसहितको स्वास्थ्य पूर्वाधार विकास गर्दै स्वास्थ्य सेवामा नागरिकको समतामूलक पहुँच स्थापित गरिने छ । औषधी तथा उपचार पद्धति, चिकित्सक र सेवा प्रवाहमा नवीनतम प्राविधिक उपयोग र जनशक्तिको उपलब्धता तथा दक्षता अभिवृद्धि गरी गुणस्तरीय स्वास्थ्य सेवाको सुनिश्चितता कायम गरिने छ। नागरिकलाई स्वास्थ्यप्रति जिम्मेवार बनाउँदै स्वस्थ जीवन शैली प्रवर्धन गरिने छ। स्वास्थ्य र शिक्षा क्षेत्रको समग्र विकासमा सरकारको लगानी र भूमिका नेतृत्वदायी रहने छ । गुणस्तरीय स्वास्थ्य सेवा तथा प्राविधिक तथा विशिष्टीकृत उच्च शिक्षा प्रदान गर्ने क्षेत्रीय केन्द्रका रूपमा नेपाललाई विकास गरिने छ ।

(ग) योजनाको विषयक्षेत्रगत व्यवस्था

१. योजनाले उल्लेख गरेका समस्या

योजनाले स्वास्थ्य क्षेत्रका विभिन्न समस्या औंल्याउँदै जनताले अपेक्षा गरे अनुरूप गुणस्तरसहितको स्वास्थ्य सेवाको पहुँच र एकरूपता कायम गर्न नसक्नु, स्वास्थ्य सेवासँग सम्बन्धित जनशक्ति उत्पादन र उपयोगबिच सामाञ्जस्यता नहुनु, स्वाथ्य सेवामा निजी क्षेत्रको सहभागिता समुदायमा प्रदान गरिने स्वास्थ्य सेवाका निम्ति नियमन हुन नसक्नु जस्ता समस्या उल्लेख गरिएको छ ।

२. चुनौतीः योजनाले विभिन्न चुनौती उल्लेख गर्दै चिकित्सा शिक्षा सम्बद्ध निम्न चुनौती उल्लेख गरेको छः

- नाफामूलक स्वास्थ्य क्षेत्रलाई क्रमशः सेवामूलक क्षेत्रमा रूपान्तरण गरी स्वास्थ्य क्षेत्रलाई मानव स्वास्थ्यप्रति जिम्मेवार बनाउनु
- स्वास्थ्य सेवा र सामाजिक उत्तरदायित्व वहन गर्ने सिप मिश्रित दक्ष स्वास्थ्य जनशक्तिको सन्तुलित व्यवस्थापन गर्नु

३. उद्देश्य (चिकित्सा शिक्षा सम्बद्ध उद्देश्यहरू)

१. सर्वसलुभ र गुणस्तरीय स्वास्थ्य सेवाको लागि सरकारको उत्तरदायित्व र प्रभावकारी नियमन अभिवृद्धि गर्दै नाफामूलक स्वास्थ्य क्षेत्रलाई सेवामूलक क्षेत्रको रूपमा क्रमशः रूपान्तरण गर्नु ।
२. बहुक्षत्रीय समन्वय तथा साझेदारीसहित स्वास्थ्य सेवामा नागरिकको पहुँचमाथि उपभोग बढाई सेवा प्रदायक र सेवाग्राहीलाई थप जिम्मेवार बनाउँदै स्वस्थ जीवनशैली प्रवर्धन गर्नु ।

४. रणनितिहरू (चिकित्सा शिक्षा सम्बद्ध रणनीतिहरू)

१. आधारभूतदेखि विशिष्टीकृत र गुणस्तरीय स्वास्थ्य सेवामा सवै नागरिको पहुँच सुनिश्चित गर्ने
२. भौगोलिक अवस्थित एवम् आवश्यकताका आधारमा संघ, प्रदेश र स्थानीय तहमा अस्पताल र स्वास्थ्य संस्थाहरू तथा सिप मिश्रित सामाजिक उत्तरदायित्व वहन गर्न सक्ने दक्ष जनशक्तिको विकास तथा विस्तार गर्ने ।
३. स्वास्थ्य सेवामा सरकारको नेतृत्वदायी भूमिका सुनिश्चित गर्दै सरकारी निजी तथा गैरसरकारी क्षेत्रविचको सहकार्य तथा साझेदारीलाई व्यवस्थापन तथा नियमन गर्ने

५. कार्यनीतिहरू (चिकित्सा शिक्षा सम्बद्ध)

१. आचार संहितामार्फत् चिकित्सक, स्वास्थ्यकर्मी र विरामीबिचको असल र सुमधुर सम्बन्ध कायम गर्दै सद्भावपूर्ण व्यवहार सुनिश्चित गर्न प्रवर्धनात्मक कार्यक्रम सञ्चालन गरिने छ ।
२. स्वास्थ्य सेवाको गुणस्तरलाई सुधार गर्न नेपाल स्वास्थ्य पूर्वाधार विकास मापदण्ड एवम् न्यूनतम सेवा मापदण्डलाई प्रभावकारी रूपमा कार्यान्वयन गरिने छ ।
३. सरकारी स्वास्थ्य संस्थामा कार्यरत चिकित्सक र स्वास्थ्यकर्मी एक मात्र स्वास्थ्य संस्थामा रहने "एक चिकित्सक र स्वास्थ्यकर्मी- एक स्वास्थ्य संस्था" को अवधारण सवै सरकारी स्वास्थ्य संस्थामा क्रमशः

लागु गरिने छ ।

४ आधुनिक विधि र निश्चित मापदण्ड विकास गरी स्वास्थ्य संस्थाको संख्या, प्रकार, स्थान तथा आवश्यक स्वास्थ्य जनशक्तिको निर्धारण गर्न गुरुयोजना तयार गरी लागु गरिने छ ।

५. स्वास्थ्य सेवामा सवैको समतामूलक पहुँच वृद्धि, स्वास्थ्य सेवामा व्यक्तिगत खर्चको न्यूनीकरण र लागत प्रभावकारिताका आधारमा स्वास्थ्यमा वित्तीय स्रोतको परिचालन गर्ने विषयलाई समेट्दै एकीकृत राष्ट्रिय स्वास्थ्य वित्तीय रणनीति तर्जुमा गरी कार्यान्वयनमा ल्याइने छ ।

६. स्वाथ्य सम्वन्धी नियमनकारी निकायहरूको जनशक्ति, संरचना र कार्यक्षेत्रलाई सुधार गर्दै सो सम्वन्धी व्यावसायिक परिषद्हरूको छाता संरचनाको विकास र विस्तार गरिने छ ।

७. स्वास्थ्य विज्ञान प्रतिष्ठानहरूलाई थप व्यवस्थित गर्न एकीकृत छाता संरचनाको विकास र विस्तार गरिने छ ।

८. निश्चित उद्देश्य प्राप्तिका लागि स्पष्ट मापदण्ड र कार्य विधि तर्जुमा गरी निजी, सामुदायिक तथा गैर सरकारी क्षेत्रका स्वास्थ्य संस्थाहरूसँग सहकार्य तथा साझेदारी गरिने छ ।

यसरी संविधान, ऐन, कानुन, योजना लगायतका दस्ताबेजका साथै शिक्षा र स्वास्थ्य सम्बन्धी नीतिले चिकित्सा शिक्षा सम्बन्धी नीतिलाई साङ्केतिक रुपमा उल्लेख गरेको भए पनि चिकित्सा क्षेत्र मानव जीवनसँग प्रत्यक्ष रुपमा जोडिने संवेदनशील क्षेत्र रहेकाले यस क्षेत्रमा रहेका समस्या समाधान गर्दै चुनौतीहरू सामना गर्नका लागि मौजुदा प्रावधानहरू समेत पर्याप्त छैनन् । यसै तथ्यलाई दृष्टिगत गर्दै चिकित्सा शिक्षा ऐन, २०७५ को दफा ६ मा चिकित्सा शिक्षा आयोगको काम कर्तव्य अर्न्तगत पहिलो कार्यमा चिकित्सा शिक्षाका क्षेत्रमा अवलम्बन गर्नुपर्ने राष्ट्रिय नीति तय गर्ने उल्लेख गरिएको छ । यसरी संसदले ऐन पारित गर्दा पनि चिकित्सा शिक्षा नीति आवश्यक रहेको महसुस गरेको पनि देखिन्छ ।

३. चिकित्सा शिक्षा नीतिको आवश्यकता

चिकित्सा शिक्षा क्षेत्रको समुचित विकास गरी राष्ट्रिय र अन्तर्राष्ट्रिय प्रतिबद्धता पूरा गर्न, संवैधानिक व्यवस्था परिपूर्ति गर्दै गुणस्तरीय चिकित्सा सेवा प्राप्तिको नागरिकको अधिकार परिपूर्तिमा सघाउ पुर्‍याउन र चिकित्सा सम्बन्धी गुणस्तरीय जनशक्ति परिपूर्तिका लागि मार्गानिर्देशित गर्न चिकित्सा शिक्षा नीतिको आवश्यकता हुन्छ । राज्य र सरकारले चिकित्सा क्षेत्रमा व्यक्त गरेका प्रतिबद्धता र अठोट पूरा गर्ने आधार पनि चिकित्सा शिक्षा नीति हुने गर्दछ । गुणस्तरीय चिकित्सा शिक्षाका क्षेत्रमा गुणस्तरीय जनशक्ति उत्पादनका लागि उपयुक्त वातावरण सिर्जना गर्न, शैक्षिक योजना तथा कार्यक्रम विकास र कार्यान्वयन गर्न, साधन स्रोतको प्राथमिकीकरण गर्न पनि चिकित्सा शिक्षा नीति आवश्यक हुने गर्दछ ।

माथि उल्लेखित स्वास्थ्य र शिक्षा सम्बन्धी मौजुदा नीतिहरूले चिकित्सा शिक्षाका बारेमा सांकेतिक रूपमा उल्लेख गरे पनि चिकित्सा शिक्षाका प्रमुख पक्षहरू जस्तै चिकित्सा शिक्षा कार्यक्रमको स्वीकृति, सिट तथा शुल्क निर्धारण, अनुगमन मूल्यांकन, नियमन जस्ता व्यवस्थापकीय पक्षका साथै पाठ्यक्रम विकासका सिद्धान्त र प्रक्रिया, पाठ्यक्रम संरचना, शैक्षणिक सामग्री, शिक्षण सिकाइ प्रक्रिया, विद्यार्थी मूल्याङ्कन र प्रमाणीकरण, लाइसेन्सिङ, छात्रवृत्ति लगायतका शैक्षिक पक्षमा बारेमा विश्वविद्यालय र शैक्षिक प्रतिष्ठानमा रहेको विविधतालाई न्यूनतम रूपमा एकरूपता र गुणस्तरीयताका बारेमा स्पष्ट व्यवस्था भएको पाइँदैन । वास्तवमा नेपालको चिकित्सा शिक्षा क्षेत्रमा रहेको धेरै किसिमका समस्याहरूका बारेमा विभिन्न समयमा भएका नागरिक समाज, विविध प्रकारका दबाब समूह र सरोकारवालाहरूबाट विभिन्न प्रकारका मागहरूको सम्बोधन गर्ने सन्दर्भमा गठित विभिन्न आयोग, कार्यदल र समितिका प्रतिवेदनहरूले दिएका उपयुक्त सुझावहरूको सम्बोधन गर्न पनि चिकित्सा शिक्षा नीति आवश्यक देखिन्छ ।

एकीकृत चिकित्सा शिक्षा नीति नहुँदा विभिन्न तहका पदाधिकारीहरू र संस्थाले निर्णय लिँदा व्यक्तिगत विचार र आग्रहका आधारमा निर्णय लिने तथा व्यक्ति वा पदाधिकारी परिवर्तन हुँदा अघिल्ला निर्णयप्रति ध्यान नदिने परिपाटीको अन्त गरी नीतिगत स्पष्टता दिँदै नीतिगत रूपमा स्थायित्व र दिगोपन प्रदान गर्न पनि यस नीतिको आवश्यकता पर्न गएको छ ।

समग्रमा चिकित्सा शिक्षा नीतिको आवश्यकतालाई निम्नानुसार उल्लेख गर्न सकिन्छ :

- चिकित्सा शिक्षा सम्बद्ध मन्त्रालयहरू, काउन्सिल, परिषद तथा पेसागत संघ, संस्थाहरूबिच हुने समन्वय र सहकार्यका मार्गहरू स्पष्ट गर्न
- चिकित्सा शिक्षा सञ्चालन गरिरहेका विश्वविद्यालय, प्रतिष्ठान र शैक्षिक संस्थाहरूबिच समन्वय, सहकार्य गर्दै आवश्यक सहयोग र सहजीकरणको मार्ग प्रशस्त गर्ने नीतिगत व्यवस्था गर्न
- चिकित्सा क्षेत्रको समग्र शैक्षिक तथा व्यवस्थापकीय पक्षहरूमा नीतिगत स्पष्टतासहित पारदर्शी र व्यवस्थित बनाउँदै दिगोपन प्रदान गर्न
- चिकित्सा शिक्षा विकासका योजना तथा कार्यक्रम व्यवस्थित गरी प्रतिफलयुक्त बनाउन,
- स्वस्थ जनशक्ति विकासका लागि आवश्यक गुणस्तरीय चिकित्सक र स्वास्थ्यकर्मी उत्पादन कार्यलाई प्रभावकारी बनाउन
- विश्वविद्यालय र शैक्षिक प्रतिष्ठानहरूको चिकित्सा शिक्षाको पाठ्यक्रमका सिद्धान्त, पाठ्यक्रम संरचना, सिकाइका क्षेत्र,

शिक्षण सिकाइ प्रक्रिया, विद्यार्थी मूल्यांकन र प्रमाणीकरण जस्ता पक्षमा रहेका विविधता र अनेकतालाई एकीकृत गर्न

- संघीय संरचनाअनुसार चिकित्सा शिक्षा क्षेत्रमा संघीय, प्रादेशिक र स्थानीय भूमिका र जिम्मेवारीलाई व्यवस्थित गर्न
- चिकित्सा शिक्षामा सक्षमता, दक्षताका साथै जीवनोपयोगी (Life Skill) तथा सामान्य व्यावसायिक सिप (Soft Skill) का अतिरिक्त पेसागत नैतिक मूल्य, मान्यता प्रवर्धन गर्ने व्यवस्था गर्ने
- चिकित्सकले चिकित्सा शिक्षालाई जीवन पर्यन्त सिकाइका रूपमा रूपान्तरण गर्ने वातावरण सिर्जना गर्न
- चिकित्सा शिक्षा क्षेत्रको ज्ञानको विकास र विस्तार तथा प्रविधिमा भइरहने परिवर्तनलाई सम्बोधन गर्न
- नेपालका चिकित्सा क्षेत्रका मौलिक ज्ञानको प्रयोगका साथै विश्व्यापी रूपमा परिवर्तित चिकित्सा शिक्षाका शैक्षिक मुद्धाहरूलाई सम्बोधन गर्न
- चिकित्सा शिक्षामा उपयुक्त वातावरण सिर्जना, खोज, अनुसन्धान र नवप्रवर्तनमा जोड दिँदै गुणस्तर कायम गर्न
- चिकित्सा शिक्षाको मूल प्रवाहमा ल्याउनुपर्ने विपन्न तथा पिछडिएका क्षेत्र, वर्ग र समूहका लागि विशेष प्राथमिकता प्रदान गर्न
- गुणस्तरीय चिकित्सा शिक्षा र सेवा सम्बन्धी राष्ट्रिय र विश्वव्यापी मुद्दा तथा मामिला सम्बोधन गर्न
- चिकित्सा शिक्षामा आधुनिक विधि, प्रविधिको बहुप्रयोग गर्न
- स्वास्थ्य क्षेत्रमा जनविश्वास आर्जन गर्दै सुशासनको प्रत्याभूति दिने वातावरण सिर्जना गर्न
- उपलब्ध साधन स्रोतको उच्चतम उपयोग गर्दै चिकित्सा शिक्षामा कार्य प्रभावकारिता, दक्षता र कार्यकुशलता अभिवृद्धि गर्न
- पेसागत तथा संस्थागत जवाफदेहिता र उत्तरदायित्व पालना गर्न गराउन
- स्वास्थ्य सम्बन्धी मौलिक अधिकार परिपूर्तिमा सघाउ पुर्‍याउन ।

४. निष्कर्ष

संघीय शासन व्यवस्थाको माध्यमबाट दिगो शान्ति, विकास र समृद्धिको आकाङ्क्षा पूरा गर्ने अभिप्रायले जारी भएको नेपालको वर्तमान संविधानले प्रत्येक नागरिकलाई मौलिक हकका रूपमा स्वास्थ्यसम्बन्धी हकको पनि सुनिश्चितता गरेको छ । उक्त मौलिक हकमा राज्यबाट आधारभूत स्वास्थ्य सेवा प्राप्त गर्ने हक हुने र कसैलाई पनि आकस्मिक स्वास्थ्य सेवाबाट बञ्चित नगरिने लगागत प्रत्येक नागरिकलाई स्वास्थ्य सेवामा समान पहुँचको हकको सुनिश्चिता गरेको छ । त्यस्तै महिलाको हकमा प्रत्येक महिलालाई सुरक्षित मातृत्व र प्रजनन स्वास्थ्य सम्बन्धी हकका साथै महिलालाई **शिक्षा, स्वास्थ्य** लगायतका क्षेत्रमा विशेष अवसरको हकको पनि व्यवस्था रहेको छ । त्यसै गरी बालबालिकाको हकमा प्रत्येक बालबालिकालाई परिवार तथा राज्यबाट **शिक्षा, स्वास्थ्य** लगायतका पक्षमा सर्वाङ्गीण व्यक्तित्व विकासको हक, दलितको हकमा दलित समुदायलाई स्वास्थ्य लगायतका सुरक्षा प्रदान गर्न विशेष व्यवस्था गरिने, आर्थिक रूपले विपन्न तथा लापोन्मुख समुदायमा नागरिकको सशक्तीकरण र विकासका लागि **शिक्षा र स्वास्थ्य** लगायतका क्षेत्रमा विशेष अवसर र लाभ पाउने हक लगायतका मौलिक हकको पनि व्यवस्था गरिएको छ ।

मौलिक हकको प्राप्तिका लागि नागरिकका आधारभूत आवश्यकता सम्बन्धी संवैधानिक नीतिमा गुणस्तरीय स्वास्थ्य सेवामा सबैको सहज, सुलभ र समान पहुँचको सुनिश्चितता गर्ने, नागरिकलाई स्वस्थ बनाउन राज्यले जनस्वास्थ्यका क्षेत्रमा आवश्यक लगानी अभिवृद्धि गर्दै जाने तथा स्वास्थ्य क्षेत्रमा भएको लगानीलाई नियमन र व्यवस्थापन गरी सेवामूलक बनाउने लगायत स्वास्थ्य सेवालाई सर्वसुलभ र गुणस्तरीय बनाउने नीति लिएको देखिन्छ । यसरी संविधानले प्रदान गरेका आधारभूत मौलिक हकको परिपूर्ति गर्न र संविधानका नीतिको कार्यान्वयन गर्न राज्यले उपयुक्त व्यवस्था गर्दै जानु अपरिहार्य हुन गएको छ ।

स्वस्थ र तन्दुरुस्त जनशक्तिले मात्र राम्रोसँग उचित शिक्षा प्राप्त गर्दै रोजगारी तथा आयआर्जन गर्दै सुखी र समृद्ध हुन सक्छ। यसका लागि गुणस्तरीय स्वास्थ्य सेवामा सबैको सहज, सुलभ र समान पहुँचको सुनिश्चितता आवश्यक हुन्छ । गुणस्तरीय स्वास्थ्यका विभिन्न अवयवमध्ये गुणस्तरीय चिकित्सक र स्वास्थ्यकर्मी पनि एक हो । गुणस्तरीय चिकित्सक र स्वास्थ्यकर्मी उत्पादन गर्न गुणस्तरीय चिकित्सा शिक्षा आवश्यक हुन्छ । यसरी गुणस्तरीय चिकित्सा शिक्षाले दक्ष र सक्षम स्वास्थ्य जनशक्ति उत्पादन गर्ने र यस्ता जनशक्तिले मात्र गुणस्तरीय चिकित्सा सेवा प्रदान गर्दै नागरिकका स्वास्थ्य सम्बन्धी हकको परिपूर्तिमा सघाउ पुग्न सक्छ ।

यसै परिवेश र सन्दर्भलाई हृदयङ्गम गरी चिकित्सा शिक्षाको क्षेत्रमा केही नीतिगत, कानुनी, संरचनागत तथा कार्यक्रमगत व्यवस्थाहरू भएका छन् । जस्तै राष्ट्रिय शिक्षा नीति २०७६, स्वास्थ्य नीति, २०७६ लगायतका नीतिगत व्यवस्था भए पनि यी मौजुदा नीतिहरू समग्र शिक्षा र स्वास्थ्यमा केन्द्रित छन् । त्यस्तै राष्ट्रिय चिकित्सा शिक्षा ऐन, २०७५ जारी भई सोअनुसार चिकित्सा शिक्षा आयोग स्थापना भएको छ । तर यो कानुनी व्यवस्था मूलतः नियमन तथा व्यवस्थापनसँग सम्बन्धित रहेको देखिन्छ । तसर्थ विशुद्ध रूपमा समग्र चिकित्सा शिक्षाका विभिन्न पक्ष र आयामका बारेमा स्पष्ट नीतिगत व्यवस्था गर्न राष्ट्रिय चिकित्सा शिक्षा नीति आवश्यक हुन गएको छ । यस्तो नीतिले हाल अभ्यासमा रहेका चिकित्सा शिक्षाका विकृति, विसङ्गतिलगायतका मौजुदा चुनौतीको सामना गर्ने मार्ग प्रशस्त गर्नुपर्छ । यसले संघीय शासन व्यवस्था अनुरुप संघ, प्रदेश र स्थानीय तहको चिकित्सा शिक्षा सम्बद्ध जिम्मेवारी पूरा

गर्न तथा विश्वविद्यालय र शैक्षिक प्रतिष्ठानका बिचमा रहेको कार्यक्रमगत विविधता र अनेकतालाई एकीकृत गर्दै समग्रमा चिकित्सा शिक्षालाई गुणस्तरीय बनाउन छुट्टै चिकित्सा शिक्षा नीति आवश्यक भएको छ । यस्तो नीति तर्जुमा, कार्यान्यवन र प्रभावकारी कार्यान्वयनको अनुगमनले सम्बन्धित क्षेत्रलाई पारदर्शी, जबाफदेही र उत्तरदायी बनाउन मार्गचित्र प्रदान गर्ने अपेक्षा गर्न सकिन्छ ।

सन्दर्भ सामग्री

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- विभिन्न शब्दकोशहरू

Journal of Medical Education Commission (JMEC)

About the Journal

Publication of JMEC started from July 2020 by Medical Education Commission of Nepal. The aim of JMEC is to promote and provide a common platform to publish the scientific works in the field of medical education as well as to foster the knowledge, disseminate the innovative ideas, technologies, teaching learning techniques in this field.

Publication: It is published biannually; in the month of January and July and is peer reviewed internally and externally.

Languages: JMEC accepts articles both in English and Nepali languages.

Field of Articles:

JMEC publishes articles from the field of medical education, medical, ethics, bioethics, teaching–learning methodology, communication skills, student-teacher training methodologies, innovations in medical education, online teaching-learning, telemedicine in medical education, national / international policies in medical education, global standards in medical education and more. Beside this, it also will publish student centered articles in medical ethics and medical education.

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JMEC requires that the manuscript submitted are the original work of the authors and it is not submitted anywhere else before submission to JMEC. Authors are solely accountable for their works, views and opinions expressed in the submitted manuscript. Manuscript should be submitted duly signed by authors declaring conflict of interest and funding sources and with a covering letter addressing to the chief editor, JMEC.

The manuscript should mention the corresponding author with full name, designation, corresponding e-mail address and contact number.

Manuscript should be typed in double spaced, only one side A4 size paper, with Times New Roman, font size 12.

JMEC does not charge any fees to the authors.

Types of articles

Authors are required to categorize the articles as original article, review article, case report, short communication, student articles as follows:

- **Original article** - the innovative and scientific works done by medical educators/ researchers /policy makers/administrators/health financers/ education financers.
- **Review article** - on critical analysis of works published in scientific literature and policies related to medical education. The source should be mentioned for data collection, selection of data location methods, extraction and analysis of data if any.
- **Case study/report** - in ethics, bioethics, clinical ethics and medical education. If any photographs are included, separate informed consent is required.
- **Short communication** - expressing author's observations, views on the issues which are debatable and controversial or relevant to current issues with their personal view on areas like medical education, ethics, bioethics, clinical ethics etc.

Size of articles

Category of article	Abstract	Total words (excluding references)	References
Original article	Up to 250 words	Up to 3000 words	Up to 50
Review article	Up to 250 words	Up to 4000 words	Up to 100

Category of article	Abstract	Total words (excluding references)	References
Case study/report	Up to 150 words	Up to 1000 words	Up to 15
Short communication	Not applicable	Up to 1500 words	Up to 10

Student's Forum

- Medical education for students / by students - Articles written by students – medical, dental, nursing, allied science but must comply the terms and conditions as mentioned in general for original article, review article, case report, short communication as well as guideline for manuscript submission and will undergo the peer review process. JMEC encourages student's articles and publishes with priority.
- Editorials – Editorials are prepared by the editorial board. Guest editorials are sought by invitation to the experts.

Referencing

Authors are required to follow Vancouver system of referencing. Here are the examples of citation:

Journal article

1. Adhikari B, Mishra SR. Urgent need for reform in Nepal's medical education. *Lancet.* 2016;388(10061):2739-2740.
2. Dhakal AK, Shankar PR, Dhakal S, Shrestha D, Piryani RM. Medical Humanities in Nepal: Present Scenario. *J Nepal Med Assoc.* 2014;52(193):751-754.
3. Dixit H. Development of medical education in Nepal. *Kathmandu Univ Med J.* 2009;7(25):8-10.
4. Baral N, Paudel BH, Das BK, et al. An evaluation of training of teachers in medical education in four medical schools of Nepal. *Nepal Med Coll* J. 2007;9(3):157-161.

➢ **Journal article published online ahead of print**

Atreya A, Acharya J. Distant virtual medical education during COVID-19: Half a loaf of bread [published online ahead of print, 2020 Jun 18]. Clin Teach. 2020;10.1111/tct.13185.

➢ **Chapter of an edited book**

Craven R. Why teach Aboriginal Studies?. In: Craven R, ed. by. Teaching Aboriginal studies. 2nd ed. Crows Nest: Allen & Unwin; 2011. p. 18.

Review Process and Publication Policy

All the manuscript received are duly acknowledged by JMEC Editorial Board. They are preliminarily screened for the requirements as they are not simultaneously submitted elsewhere other than JMEC as declared by authors, duly signed cover letter to the chief editor, preferably categorized article by the authors (original article, review article, case report, short communication) fulfilling the requirement as described in types of students forum manuscript. The articles with flaws in technical, scientific or ethical content will not be considered for publication process.

The screened manuscripts are then proceeded for review by external reviewers other than JMEC as a peer review process. JMEC communicates to the author with the reviewer's comments for correction if suggested and has the right to accept, to make re-correction and resubmit or reject the manuscript.

Acceptance of manuscript is communicated to the corresponding author in writing and proceeded for publication process.

Accepted articles are submitted for peer review, grammatical editing, formatting in JMEC style. Page proofs are sent to corresponding authors before publication.

Ethical Clearance: Works involving the humans or data collected with direct involvement of participants will need an ethical clearance letter duly signed from ethics committee. All the data involving participants should be anonymized.

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नेपाल सरकार

चिकित्सा शिक्षा आयोग

सानोठिमी, भक्तपुर

चिकित्सा शिक्षा जर्नलका लागि लेख रचना पठाउने सम्बन्धी जानकारी

यस आयोगबाट 'चिकित्सा शिक्षा जर्नल (Journal of Medical Education Commission-JMEC)' आर्थिक वर्ष २०७६/२०७७ देखि नियमित रूपमा प्रकाशन हुन सुरु भएकाले आगामी अङ्कहरूका लागि देहायबमोजिमका लेखको ढाँचा तथा विधामा उक्त पत्रिकाका लागि लेख रचना प्रकाशनार्थ यस आयोग वा तल उल्लिखित इमेलमा उपलब्ध गराई सहयोग गरिदिनु हुनका लागि सम्बद्ध सबैको जानकारीका लागि अनुरोध गरिएको छ ।

तपसिल

१. लेख रचनाको ढाँचा (Format of Articles)

- शीर्षक (Topic)
- लेख सार (Abstract) : १५० देखि २०० शब्दसम्म
- मुख्य शव्दावली (Keywords) : नेपालीमा लेख रचना भए नेपाली र अङ्ग्रजीमा समेत
- विषय प्रवेश (Background)
- विषयवस्तुको विश्लेषण विस्तार (Analysis Expansion of the content/text)
- परिचय, नीतिगत व्यवस्था, नेपालको चिकित्सा शिक्षाका सन्दर्भमा यसको प्रयोग/उपादेयता, भावी दिशासहित लेखरचनाको प्रकृति अनुसार (Use, implications and future direction in Health Profession Education in Nepalese context)
- निष्कर्ष (Conclusion)
- सन्दर्भ सामग्री (Reference materials) APA format अनुसार लेखमा उल्लेख तथा साभार गरिएका मात्र
- लेखकको नाम, कार्यरत कार्यालय, पद, योग्यता, प्रकाशन कृति, सम्पर्क फोन र इमेल ठेगाना

२. लेखकहरूलाई विशेष अनुरोध

(क) लेख नेपाली वा अङ्ग्रेजी भाषामा २, ००० शब्ददेखि ३, ००० शब्दसम्म (६ देखि १२ पेजसम्म) टाइप गरेको सफ्ट कपीमा हुनु पर्नेछ ।

(ख) लेख नेपालीमा टाइप गरेको भए A4 पेपरसाइजमा Himalli or Preeti मा १४ फन्ट र अङ्ग्रेजीमा टाइप गरेको भए Times New Roman, 12 फन्ट/साइजको अक्षर र लाइन स्पेस १.२ मा टाइप गरेको हुनुपर्ने छ ।

(ग) लेख रचना आयोगको इमेल jmec@mec.gov.np वा सवैमा र यस आयोगको ठेगानामा पठाउन सकिने छ। थप तथा अन्य जानकारी चाहिएमा यस आयोगको National Board of Speciality सानोठिमी वा ०१-६६३९३१४ मा सिधै सम्पर्क गर्न सकिने छ ।

(घ) प्राप्त भएका लेख रचनाहरूलाई लेखकले पठाएकै पाण्डुलिपिमै मूल्याङ्कन, पुनरावलोकन गरेर मात्र सम्पादन र प्रकाशन गरिने छ । त्यसैले भाषागत र विषयवस्तुको शुद्धता, प्रमाणिकता, अद्यावधिकतामा विशेष सतर्क हुन अनुरोध छ ।

(ङ) लेख रचना प्रकाशन गर्ने वा नगर्ने र काँटछाँट गर्ने अधिकार सम्पादक मण्डलमा रहने छ । अप्रकाशित लेख रचनाहरू लेखकलाई फिर्ता गरिने छैन ।

(च) प्रकाशित हुने लेख रचनाको प्रतिलिपि अधिकार आयोगमा रहने छ । तर लेखमा प्रयुक्त विचार र अवधारणा लेखकका निजी विचार हुने र तिनले आयोगको प्रतिनिधित्व गर्ने छैनन् ।

३. लेख रचनाका क्षेत्रहरू

१. चिकित्सा शिक्षा सम्बन्धी नीति, योजना, कार्यक्रम तथा सो सम्बन्धी समसामयिक विषयवस्तु,

२. चिकित्सा शिक्षा सम्बन्धी राष्ट्रिय तथा अन्तर्राष्ट्रिय अभ्यास सम्बन्धी अध्ययन, खोज, अनुसन्धान तथा समसामयिक विषयवस्तु,

३. चिकित्सा शिक्षा आयोगका कार्य क्षेत्रका वर्तमान तथा भावी कार्य, समस्या र चुनौती तथा समाधानका उपायहरू

४. चिकित्सा शिक्षा सम्बन्धमा भए गरेका नेपालका मौलिक अनुभव र अभ्यासहरू

५. चिकित्सा शिक्षाका उपयुक्त अन्य विषयवस्तुका विधागत क्षेत्रहरू (Potential areas for article) जस्तै:

- चिकित्सा शिक्षाका शिक्षक/कर्मचारी तालिम र पेसागत विकास (Teacher/Management Training and Professional Development in Health Education Profession)
- चिकित्सा शिक्षामा सुशासन (Good Governance in Health Education Profession)

- चिकित्सा शिक्षामा व्यवस्थापन गतिशीलता (Management Dynamics in Health Education Profession)
- चिकित्सा शिक्षामा वित्तीय व्यवस्थापन (Financial Management in Health Education Profession)
- चिकित्सा शिक्षामा शिक्षक शिक्षा (Teacher Education in Health Education Profession)
- चिकित्सा शिक्षामा मूल्याङ्कन प्रणाली (Educational Evaluation in Health Education Profession)
- चिकित्सा शिक्षाका जल्दाबल्दा मुद्दाहरू (Potential and Crosscutting Issues in Health Education Profession)
- चिकित्सा शिक्षामा गुणस्तर (Quality in Health Education Profession)
- चिकित्सा शिक्षामा विश्वव्यापीकरण तथा स्थानीयकरण (Globalization and Localization in Health Education Profession)
- चिकित्सा शिक्षामा विधागत/विषयगत शिक्षण सिकाइका विधि, प्रक्रिया, अनुभव तथा अनुसन्धानहरू (Theme/Subjectwise teaching learning methods, strategies, experiences and research outputs in Health Education Profession)
- चिकित्सा शिक्षासँग सम्बन्धित सोध तथा अनुसन्धानहरू (Research Reports related to Health Education Profession)
- चिकित्सा शिक्षाका विभिन्न शैक्षिक परियोजना, योजना तथा कार्यक्रमहरू (Different projects, plans and programs in Health Education Profession, etc.)

४. लेख रचनाको ढाँचा र अन्य पक्ष

१. लेख रचनाहरू चिकित्सा शिक्षा सम्बन्धी नीति, योजना, कार्यक्रमको विश्लेषण तथा खोज अनुसन्धानमा आधारित हुनुपर्ने

२. विचारमूलक, विश्लेषणात्मक र अनुसन्धानात्मक लेखहरूलाई प्राथमिकता दिइने

३. लेखमा सन्दर्भ सामग्री तथा तथ्य तथ्याङ्कहरूको स्रोत स्पष्टसँग उल्लेख हुनुपर्ने

४. लेख रचनाको ढाँचा अनुसन्धानमूलक हुनुपर्ने

५. विचारमूलक तथा विश्लेषणत्मक लेख रचनामा न्यूनतम- (१) कार्यकारी सारांश, (२) पृष्ठभूमि वा परिचय वा विषयप्रवेश, (३) सैद्धान्तिक वा नीतिगत पक्षको विश्लेषण, (४) समस्या, चुनौती र समाधान, (५) निष्कर्ष र (६) सन्दर्भ सामग्री जस्ता पक्षमा ध्यान दिनुपर्ने

६. चिकित्सा शिक्षा पत्रिकाका लागि चिकित्सा शिक्षाका नीतिगत तहदेखि कार्यान्वयन तहसम्मका शिक्षाको विकासको विद्यमान अभ्यास तथा भावी कार्यदिशामा केन्द्रित अनुसन्धान, अनुभव, सिद्धान्त र अभ्यास, सूचनामूलक तथ्यहरूलाई समेत समेटेर लेख रचना तयार गर्न अनुरोध गरिएको ।

७. लेख रचनासँगै लेखकले आफ्नो अद्यावधिक गरिएको व्यक्तिगत विवरण (CV) संलग्न गरी पठाउन सुझाव गरिएको ।

८. प्राथमिक तथ्याङ्कमा आधारित लेख रचनालाई बढी प्रथमिकता दिइनेछ । प्रति पृष्ठ १५ प्रतिशतभन्दा बढी मौलिक नभई अरूका कुरा उद्धरण भएका (Copied) र प्रायस हुवहु सारिएका लेख रचनाहरूलाई सुरुकै छनौट प्रक्रियाबाटै हटाइने भएकाले लेखरचना तयार गर्दा यसतर्फ विशेष ध्यान दिन अनुरोध गरिएको छ ।

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