



Nationwide Evaluation of Urology Residency Program (MCh Urology) in Nepal

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Introduction: Medicine and Medical Education are both ever-changing and dynamic fields. There have been a lot of changes in past decades and it is imperative to keep up with the changes. The education system needs periodic evaluation with affirmation and corrections as per requirement. This study aims to evaluate the urology residency program (MCh Urology) and its outcome in Nepal.

Methods: This is a cross-sectional study conducted through a self-administered questionnaire via email. The questionnaire in the form of a Google form was sent via email to 35 MCh graduates and 30 urology residents currently enrolled in the residency program in Nepal.

Results: A total of 19 graduates and 24 residents submitted the form. All graduates agreed that article writing training should be a mandatory part of the MCh curriculum. Among residents, 79.2% believed that a thesis should be required and 87.5 % believed that article writing should be compulsory. Both graduates and residents believed the MCh curriculum should be competency-based. All residents believed renal transplants should be an integral part of the curriculum. Seventy-five percent of residents expected residency to have a negative impact on social and family life.

Conclusion: The common consensus among residents and graduates is a continuation of the thesis and research activities, modification of structured exit examination, and adaptation of a competency-based education system.

Keywords: Medical education, residency, training, urology

Introduction

The practice of Urology dates back to ancient times when ancient Hindu surgeons attempted to remove bladder stones through a suprapubic incision.¹ In France, Germany, and the USA urology has been recognized as a subspecialty since the 1880s.² Urology services in Nepal had been carried out by general surgeons interested in the field with urological training outside the country in the past. The formal 3-year (Post-Masters) urology training program, Magister Chirurgiae (MCh)³, was started in Nepal in 2008 AD in the urology unit of the Department of Surgery, TU Teaching Hospital, Institute of Medicine (IOM), Tribhuvan University (TU).⁴ The first candidate, Dr. Pawan Raj Chalise, enrolled in the MCh program in IOM and completed the training in 2011 and Professor Bhola Raj Joshi supervised the program. Ten institutes are running the MCh Urology program in Nepal, and 10 students were enrolled in 2023. At the program's start, all universities were conducting their entrance examination specifying the urology subjects. Now, the Medical Education Commission (MEC) conducts a common entrance examination for all MCh programs

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and students choose the subject based on merit.

The training program in Nepal is a traditional volume-based Halstedian model of training.⁵ The training program consists of three years of residency after completion of three years of general surgery residency. Multiple factors like program structure, family and social life, availability and accessibility of the resource materials, hands-on surgical training, time management, and support from mentors affect the outcome of the residency program.⁶ Since the inception of the urology residency program in Nepal, no study has been found which has evaluated the residents' expectations and graduates' experience. This study was planned to evaluate the expectations of residents during residency and graduates' satisfaction after the completion of training.

Methods

This was a cross-sectional study conducted from May to October 2023 and approval was obtained from the Institutional Review Board. The questionnaire in the form of a Google form was sent via email to 35 MCh graduates and 30 urology residents currently enrolled in the residency program in Nepal. There was no female urology resident, and two MCh graduates were female. The questionnaire consisted of demographic information, a section on entrance and exit examination, research, thesis, time management, availability of resources, hands-on training of the residents, and overall satisfaction of urology residents and MCh graduates.

Results

A total of 19 (54.2%) MCh graduates and 24 (80%) urology residents responded to the Google form sent to their email. Of the residents who responded, eight were in the first year, seven were in the second year, and nine were in the third year of residency. All the MCh graduates and urology residents who responded were male. The mean age of the MCh graduates was 41.8 years (SD = 2.3 years) and that of urology residents was 34.9 years (SD = 2.3 years). Entrance examination

On the questions regarding the entrance examination, 76.6% of MCh graduates and 71.8% of urology residents were satisfied with the previous system of entrance examination taken by respective universities where subjects need to be chosen before the merit list. Regarding the common Medical Education Commission (MEC) entrance examination, 47.4% of the MCh graduates and 83.3% of the urology residents agreed and believed that the common entrance examination is the key to selecting good students. The majority (94.7% of MCh graduates and 79.2% of urology residents) believed that the choice of subject should be given to the candidate before the entrance examination.

Exit examination

All MCh graduates and urology residents believed that

the university exit exams should be mandatory and should have structured objective and subjective questions. On the question, 84.2% of graduates and 83.3% of residents believed residency prepares them well for board exams. All of them agreed that there should be dedicated study time for final exam preparation. Residents think an average of 60 days' preparation leave is needed, which seems impractical in the current practice.

Thesis and research publication

All graduates agreed that thesis and research paper writing should be mandatory and all, except one, agreed that the thesis helped enhance their research skills. All graduates agreed that paper writing training/workshops should be a mandatory part of the MCh curriculum. Among residents, 79.2% believed that a thesis should be mandatory and 87.5% believed that article writing should be mandatory. While responding, 87.5% of residents believed time management could be a problem for thesis and research paper writing, and 78.9% of MCh graduates accepted that they experienced difficulty in managing time for the thesis and paper publication. Most of the (84.2%) MCh graduates confirmed that MCh Urology training helped them to become better researchers, while only 66.7% of residents expected to be good researchers after MCh Urology training.

Case exposure

All MCh graduates agreed that adequate exposure to cases in wards and outpatient settings is necessary during training. However, 10.5% of MCh graduates confirmed that they didn't have adequate operation theater exposure and 31.5% did not have adequate equipment during training. Also, 87.5% of residents complained that they didn't have adequate exposure to cases in wards and outpatients. They also confirmed that adequate equipment was not in the operation theater and hands-on training during residency.

MCh Curriculum

Both MCh graduates and residents believed that the MCh curriculum should be competency-based. All residents suggested that renal transplantation should be an integral part of the curriculum. All MCh graduates agreed that MCh helped them become competent urology surgeons at the cost of social and family life. Among the residents, 75% expected that their residency was going to have a negative impact on social and family life.

Discussion

Medical education is a hard and long journey. With the rapidly growing and changing field of urological sciences, the training program is getting harder. Balancing social and family life and urology practice is becoming a concern with growing mental health issues. This survey is conducted to evaluate the overall residency program and how it has helped in improving the urology practice in the country.

In our study, none of the female graduates responded to the Google form that was sent to email. There were two female MCh graduates and no female urology residents currently. Globally, though females remain underrepresented in urology, there has been a gradual increase in female urologists. In the United States female urologists and urology residents account for 10% and 30% respectively.⁷

Not all urology training programs around the world have made thesis or research a mandatory part of the training program. In Nepal, thesis and research articles are compulsory parts of the curriculum. The majority of participants believed this curriculum helped them become a better researcher. A study from Singapore by Chan et al. has shown that 85% of residents believed lack of time was the most important barrier to residents' involvement in research and this is similar to 87.5% of residents who thought time management for research could be difficult and 78.9% graduates agreed to have difficulty with time management for research.⁸

The majority of graduates agreed to have adequate surgical exposure during residency while some of the residents are not getting adequate exposure which is consistent with the study by Margolin et al., which showed that case exposure to junior residents decreased in the United States.⁹

North American urology training programs have incorporated the competency-based curriculum since the turn of the 21st century. In Nepal, we are still not yet adapting the competency-based education. However, all the residents think Nepal should adopt a competency-based curriculum in urology training programs.¹⁰

Conclusion

Both the MCh (Urology) graduates and residents believed most of the programs incorporated in residency like thesis and research activities should be continued with changes like structured exit examination with dedicated study time, an adaptation of a competency-based education system, and ensuring adequate surgical exposure in the urology training program.

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