LANKAN MEDICAL GRADUATES

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The concept of an ideal doctor for Sri Lanka was the theme of an oration recently[1]. It was extremely encouraging to note that with few exceptions the views of the orator, and eminent and highly respected emeritus professor who has taught thousands of doctors including the author, were similar to those of the author. Even ardant nationalists w ho firmly believe that Ayurveda is the best and others who believe that Homeopathy is the best, turn to Allopathy (western medicine) when a serious illness affects them. Therefore, Lankan doctors should acquire the necessary skills and attitudes and have a deep knowledge and understanding of western medicine.

Western medicine is thought to have originated in Egypt where priests practised the healing art. Even in other cultures the traditional 'medicine man' was either a priest or involved in witchcraft and was held in high esteem, awe, respect and often even feared, The knowledge and the skills of the art were either handed down from father to son or were taught to a few selected disciples.

In Sri Lanka too the well known phrase "Rajakama nathnam wedakama" exemplifies this. Over the years however this has changed. The role of the priest upholding standards and moral values, and counseling has apparently suffered as a result of rapid advances in science. Diagnostic and clinical skills appear to have deteriorated as a result of over dependence on high-tech investigations, ignoring common sense and basic principles. Procedural and surgical skills of the young postgraduates also appear to have deteriorated even in developed countries [2].

In the United Kingdom (UK) there is also some concern that appointments in clinical academic medicine involving teaching, clinical practice and research, especially in the procedural disciplines like obstetrics and gynaecology which were highly sought after and considered prestigious earlier, appear to have become less attractive to the younger doctors who have graduated with honours in the recent past [3]. To address these issues, several factors need to be considered.

Selection of Candidates

Selection of suitable candidates is the ' sine qua non' which will affect the quality of the graduates. Different countries and universities have different criteria of selection. The pros and cons of the current scheme of recruitment of students to the medical faculties in Sri Lanka are well known and will not be discussed on account of their political and controversial nature. However it is pertinent to consider the findings of studies carried out in the UK recently. The question posed in the UK was "are the 'wrong people' being selected: are they suited to do medicine and is medicine suited for them?"[4]

Why does a person want to be a doctor? Sometimes it is due to advice and pressure from parents and elders, and perceived advantages in the future. In the UK apparently very few doctors have a strong sense of vocation and say that they "always wanted to be doctors". They also show a marked change in their background. They are less likely to be boys from private boarding

schools and from medical families and more likely to be girls from public schools and from non medical families but having very good Advanced Level (A/L) results in science. Most of them have not received any proper career guidance in school. Some have been actively discouraged from even thinking of a medical career while others who may have been happier as scientists or doing something quite different have been advised and encouraged to do medicine. Many of them have entered medical faculties without appreciating what it entails [5].

Doctors in the UK who expressed regret at studying medicine after realising that they had chosen the wrong field, also had a strong feeling of despair as they were not trained to do anything else either. They blamed the system where changing the career after entering a medical faculty was virtually impossible and pressure from parents, peers and teachers made them continue their medical studies [5].

Undergraduates in Sri Lanka are allowed up to a total of 10 years to complete their courses which actually should be only four and a half years. Reducing the maximum period allowed to seven years and strictly limiting the number of attempts at the 2nd MBBS to two attempts should be considered. This would enable unsuccessful candidates to change their careers early without ruining their entire lives in the future. In most postgraduates examinations conducted nationally and internationally the maximum period as well as the number of attempts allowed for completion are restricted now.

Studies have shown that medical students from Ruhuna were more likely to be daughters of school teachers. Those who have obtained very good A/L results and equally good results for English language at the Ordinary level were more likely to graduate with honours. In order to emphasis the importance of a good working knowledge of English, teachers in medical faculties in Sri Lanka should insist that medical students speak only in English and thereby encourage them to master the language. The vast majority of Ruhuna Medical students who had obtained very good A/L results had not participated in any extra curricular activity in school. In the UK however most of the students entering the medical faculties were found to be 'all rounders' who had indulged in several extra curricular activities. They also had the spirit of inquiry, a vital core value in medicine [5]. It is unfortunate that Lankan medical students apparently lack both those attributes. The lack of an inquiring mind is probably due to a focus on memorising as opposed to thinking from their school days. Many Lankan students believe that ' correct' answers are found in books and can be obtained from authorities such as teachers, parents and political leaders, and consider questioning as disrespectful. In fact this had been suggested to be a cultural problem that "Asians can't think"! [6]. Many Lankan medical students also do not realise the importance of mastering procedural skills which cannot be learnt from lectures and books. Medical teachers in Sri Lanka should take all possible steps to correct these deficiencies.

Undergraduate Medical Education

Medical education in Sri Lanka has changed from the traditional science based learning approach to a competency based approach with clearly defined objectives [7,8]. The emphasis has changed from teacher participation and control to increased student participation and self learning. The curricular too have changed from the traditional system based approach to a more integrated modular approach. Problem based learning (PBL) is being increasingly recommended[9,10,11] but it is time consuming and needs proper organisation [12]. Small group discussions and tutorials are also useful but required adequate staff [11]. Fixed leaning modules

and time for self or group learning should be provided. Student seminars should be organised. They should be stimulating, problem based, patient centered, evidence based and interactive [13].

The importance of mastering clinical and procedural skills and the fact that they cannot be learnt from books and lectures should be emphasised. Teaching of clinical skills should be introduced early to pre clinical students [14,15]. This will improve their diagnostic skills in terms of knowledge and flexibility of thinking and reasoning, and also increase their self confidence [14]. Teaching should ideally be more than simply lecturing and explaining, or demonstrating a procedure. It should also create the conditions for learning by coordinating the available resources to achieve the learning objectives in the best possible environment. This is especially relevant in the clinical and procedural disciplines where a great deal of organisational support is required to achieve it [16,17,18]. It is recommended that evidence based medicine too is introduced early to pre clinical students [19]. Students should be taught and encouraged to undertake research projects as this will strengthen their ability of critical and logical thinking [20,21,22]. Scientific competence of the supervisor is considered to be the most important criterion for good student research [22]. The studies on Ruhuna medical students, which were mentioned earlier, were carried out by groups of students themselves.

The ethics and discipline of present day medical students who will become the doctors of the future is being seriously questioned [23,24,25]. Undergraduate ethics education is important and various methods are used [26]. It has been proposed that a code of conduct for medical students should be introduced at the very commencement of medical training [27]. It is the duty of all medical teachers to ensure a high level of conduct and discipline among medical students. Medical graduates have to submit a certificate of good conduct from their respective Deans and also affirm and sign the Declaration of Geneva, a modified version of the original oath of Hippocrates, at the time of registration at the Medical Council of Sri Lanka.

It is important that medical teachers are competent not only in subject matter and skills but also in the use of current and appropriate instructional methods. They should also contribute to the intellectual development of the students [28]. Not only the knowledge and skills but also the attitude of the teacher especially in the clinical disciplines has a profound effect on the future career of a medical graduate and his choice in specilisation. Studies carried out in the UK have shown that career advice regarding specialisation is poor and that young doctors make career decisions depending on the personality and interests of individual consultants. In this respect both encouraging as well as discouraging role models were found [5].

These studies also suggested that luck, rather than a careful assessment of options, seems to play a larger role in many successful medical careers not only in determining the speciality but also in determining whether it was going to be an academic or clinical career [5].

Evaluation

It is important to ensure that student assessments are fair, reliable, valid and congruent with the course objectives [28,29,30]. Ideally continuous formative evaluations should be combined with summative and end of course evaluations. A structured log book where the students record their clinical experiences is an effective and widely used method of documentation and comparing st dents' clinical experience. The method of documentation may vary [31].

It is necessary that an appropriate method is used to assess the particular competence which is to be evaluated. The frequently used global rating system of clinical competence using a structured format, although appearing to have "face" validity, actually has no reliability at all [30,31]. The objective structured oral examination (OSCE) is ideally suited for this purpose [29,30].

Developing OSCE stations is time consuming and should be done very carefully. However as individual skills such as interviewing the patient, physical examination, interpreting data, rationalising treatment options, communication and counseling skills, and procedural skills are compartmentalised, it is difficult to evaluate a student's approach to a whole patient. The main advantages of the OSCE are that it reduces inter observer/ examiner variations by using a structured marking scheme and allows students variation in different clinical situations. Since all the students go through the same circuit of evaluation it is very fair by the students enabling them to excel in certain stations although they may have performed badly in others. The use of patients for the Clinical Examination has raised ethico legal issues which needs to be addressed [33]. Although difficult to organise, it still has a place in the evaluation of the student's overall approach to the patient as a whole.

There are several types of written examinations which could be used to evaluate theoretical knowledge. The Multiple Choice Question (MCQ) examination is the most effective method of evaluation across a broad content area. There are several types of MCQQ. The construction of good MCQQ is not easy and needs skill and experience. They should not assess simple factual recall only. MCQQ can and should be used to assess more complex judgement and application of knowledge especially in the clinical disciplines [29,34]. Structured essay questions (SEQ) are being increasingly used and the student is guided through different steps. eg. differential diagnosis, relevant investigations, and plan of management of a clinical problem. This is considered better than the traditional essay question. The short answer essay question (SAEQ) which focuses on a particular aspect of an area of evaluation has been introduced in certain postgraduate exams.

The traditional essay question (EQ) examination has been considered to be an unreliable method of evaluation because only a small number of areas can be sampled, and they are usually general questions requiring extended answers [29,34]. However, an EQ is able to assess the extent of knowledge in a particular area both in breadth and depth, and the student's ability to organise thoughts together and synthesis a meaningful message. In order to make the EQ examination more valid and reliable a predetermined structured marking scheme can be used.

The traditional 'open' *viva voce* for oral examinations is too subjective to be of value. However it can be used to assess depth on knowledge, details of emergency management, and even certain procedural skills. To make the oral examination more objective, reliable and valid, the questions as well as the marking scheme could be structured [29].

Conclusions

There is no doubt that the quality of medical graduates should not be allowed to deteriorate. In fact the establishment of an International Register of Medical Schools has been recommended. Medical schools will then be evaluated prior to registration [35]. The use of an aptitude test should be considered to select candidates suitable to undergo medical education from the large number of eligible candidates who have obtained high grades at the A/L examination. The importance of a satisfactory command of English too should be stressed.

Medical students should be encouraged to think and reason out rationally without memorising facts and figures. Using newer and more effective instructional methods there should be greater emphasis on self learning and student participation in the learning process.

Student evaluation should be fair, reliable valid and appropriate to the competencies which need to be assessed. The highest levels of conduct and discipline too should be maintained. This will ensure the high standards and quality expected of medical graduates.

References

1. Fonseka C. Towards a concept of the ideal doctor for Sri Lanka. Deshamanya Nandadasa Kodagoda Memorial Oration 2002. The Daily News Aug 5, 2002, pg 9.

2. Taylor McD. Undergraduate procedural skills training in Victoria: is it adequate? Medical Journal of Australia 1997; **166:** 251-254.

3. Symmonds EM & Arulkumaran S. Recruitment and training of academic staff in Obstetrics & Gynaecology. Baillier's Clinical Obstetric & Gynaecology, 1999; **13** (iii): xv-xvii.

4. McManus IC. From selection to qualification. How and why students change. In: Allen I, Brown P, Hughus P (Eds). Choosing Tomorrow's Doctors. London Policy Studies Institute 1998.

5. Allen I. Factors affecting career choices in Medicine. Baillier's Clinical Obstetrics & Gynaecology 1999;**13** (iii): 323-336.

6. Shaw S. Time May 31, 1999, pg 23.

7. Bandaranayake RC. How to plan a medical curriculum. Medical Teacher 1985; **7**: 7-13.

8. World Health Organisation. Competency based approach to curriculum development. Report on regional workshop on nursing and HIV infection, Sydney, Australia March 1989, p 1-15.

9. Azar SA. Problem based learning. Challengers, barriers and outcome issues. Saudi Medical Journal 2001; **22** (v): 389-397.

10. Boon JM, Meiring JH, Richards PA, Jacob CJ. Evaluation of clinical relevance of problem orientated teaching in undergraduate anatomy at the University of Pretoria. Surgery Radiology and Anatomy 2001; **23** (i): 57-60.

11. Leggat PA. Learning experience in medical education. Medical Teacher 2000; **22**(iii): 288-292.

12. Senevirathne RD, Samarasekera DD, Karunathileke IM, Ponnamperuma GG. Students' perception of problem-based learning in the medical curriculum of the Faculty of Medicine, University of Colombo. Annals of Academic Medicine of Singapore 2001; **30**(iv): 379-381.

13. Abu-Zaiden FM, Windsor JA. Students' evaluation of surgical seminars in a teaching hospital. Medical Education 2001; **35**(vii): 673-680.

14. Lam TP, Irwin M, Chow LW, Chan P. Early introduction of clinical skills teaching in a medical curriculum-factors affecting students' learning. Medical Education 2002; **36**(iii): 210-211.

15. Sobral DT. Appraisal of medical students' diagnostic ability in relation to their learning achievement and self-confidence as a learner. Medical Teacher 2000; **22**(i) 59-63.

16. Rotem A, Bloomfield L, Southon G. The clinical learning environment. Israel Journal of Medical Sciences 1996; **32**(ix): 705-710.

17. Rotem A, Godwin P, Du J. Learning in hospital settings. Teaching and learning in Medicine 1995; **7**(iv): 211-217.

18. Teichman JM, Monga M, Littlefield JH. Third year medical student attitudes towards learning urology. Journal of Urology 2001; **165**(ii): 538-541.

19. Sirinivasan M, Weiner M, Breitfeld PP, Brahmi F, Dicerson KL, Weiner G. Early introduction of an evidence-based medicine course to preclinical medical students. Journal of General Internal Medicine 2002; **17**(i): 58-65.

20. Stacpoole PW, Fisher WR, Flotte TR, Geiser EA, Theriaque DW, Hutson AD. Teaching hypothesis-orientated thinking to medical students: the University of Florida's clinical investigation program. Academic Medicine 2001; **76**(iii): 287-292.

21. Frishman WH. Student research projects and theses: should they be a requirement for medical school graduation? Heart Disease 2001; **3**(iii): 140-144.

22. Remes V, Helenius I, Sinisaari I. Research and medical students. Medical teacher 2000: **22**(ii): 164-167.

23. Mendis S. Attack on 37 nurses following lectures. Galle Faculty of Medicine students spreading falsehood. The Island. July 25,2002, pg. 2.

24. Fernando N. Terrorist Medical Students of the Ruhuna Campus. The Daily News, 28 August.2002, pg. 19.

25. Ruhuna Medicoes - What Next? Lanka Woman, 31 July 2002.

26. Robins LS, Braddock CH 3rd, Fryer-Edwards KA. Using the American Board of Internal Medicine's "Elements of Professionalism" for undergraduate ethics education. Academic Medicine 2002; **77**(vi): 523-531.

27. Fernando R. Code of ethics. Code of conduct for medical students. Sri Lanka Medical Association News. Dec 2001; pg. 5.

28. Muray H. Gillese E, Lenon M, Mercur P, Robinson M. Ethical Principles in University Teaching. Society for Teaching and Learning in Higher Education. Ontario 1996.

29. McMaster University. Evaluation Methods: A resource hand book. Program for educational Development. McMaster University Press. Ontorio 1995, pg. 12-107.

30. Evaluation Assessment working party. Flinders University Graduate Medical School. Assessment Handbook 1996, Flinders University Press Ontario.

31. Rattnar SL, Louis DZ, Rabinowitsz C et al. Documenting and comparing medical students' clinical experiences. Journal of American Medical Association 2001; **286** (ix) 1035-1040.

32. Steiner DL. Global Rating Scales. Oral examinations in assuring clinical competence. Springer Publishing Compny, New York, pg. 119-141.

33. Sayer M, Bowman D, Evans D, Weisser A, Wood D. Use of patients in professorial medical examinations: Current UK practice and the ethicco legal implications for medical education. British Medical Journal 2002; **324**: 404-407.

34. Cox K. What type of written examination should I use? The Medical Teacher 1994; **21**: 144-146.

35. De Silva NR, Samarasinghe HHR. Quality in medical education. Ceylon Medical Journal 2000; **45**: 55-57.