BREAST IMAGING FELLOWSHIP: CHALLENGES AND SOLUTION

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PJR January - March 2014; 24(1): 22-24

Introduction

The discovery of x rays and their imaging properties by Roentgen revolutionized the diagnostic modalities. With subsequent development of new imaging modalities like computed tomography CT, sonography and MRI the need for sub specializations was identified, which should be oriented towards the disease process and organ system. Breast imaging is recognized as a subspecialty in radiology with mammography as an important component and holds a key position not only in breast cancer screening and diagnosis but also for staging and post treatment surveillance. There are not enough qualified radiologists to interpret the screening mammography or to perform diagnostic evaluation in case of abnormal screening finding.[1] Newly trained radiologist can play an important role in overcoming the staffing shortage but it is difficult to attract them to the field of breast imaging due to various reasons including lack of interest. After comprehensive literature search it was learned that this was a universal trend and reported in many research and review articles.[2]

Fellowship in breast imaging is essential because breast cancer is second only to lung malignancies as a cause of cancer death. The objectives are detailed understanding of the clinical process, to investigate and correlate the imaging manifestations of the diseases related to breast and to have interaction with the clinical specialist and to enhance collaboration in research projects to increase medical knowledge.

This article facilitate the development of strategies to attract trainees to career in this fellowship programme which shall be beneficial to the learners and finally to the society as a whole.

Problems and Strategies for Rectification

Gender discrimination was one factor in this issue, since the female patients feel comfortable with and require their examination to be done by female doctor only; the male physicians are hesitant to pursue their career in breast imaging. This problem is unique in our setting due to cultural and religious differences. One way to address this is the effective and judicial use of standardized patients[3] for history, examination and for teaching and assessing the communication skills. The availability of skills lab for attaining procedural skills like biopsies, localization etc. holds a promising position in such scenarios.

Another reason for the decline in the number of radiologists choosing breast imaging is due to the concern about malpractice litigation and job related stress as compared to other radiological sub specialties like neuroimaging and vascular interventional radiology. This problem requires tremendous efforts towards effective utilization of teaching and learning strategies with respect to multiple intelligence theory. Teaching in small groups,[4] including the resident's regular rotation in the breast imaging section promotes active learning, supports self-inspiration, allows application and advancement of ideas, and promotes deep, adult style, problem based and self-directed learning.

The devised curriculum which is to be based on clear and crisp objectives also holds a key position because

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Submitted 31 January 2015, Accepted 14 February 2015

it determines the academic proficiency and is intended to serve three purposes[5] like provide guidance to the stake holders in developing, assessing and improving the program. Second the listing of topics that needs to be learned and the experiences to be acquired during the fellowship. Third to specify the material they need to know to remain up to date.

Pairing of the curriculum with the study guide[6] makes the job easy for the fellows as it highlights what the fellow aims to achieve as they work through a curriculum.

In the radiology setting we are predominantly dealing with images but there is great deal of patient encounter in breast imaging e.g. history taking and brief local examination prior to mammography and MRI of breast, while carrying out ultrasound, during interventional procedures etc. Different levels of supervision should be applied so that the learner gains knowledge along with independent thinking and confidence e.g.the SNAPPS[7] model, which is a learner led educational encounter assisted by the preceptorand ensures the delivery of information along with the learners assessment and feedback.

Improvement in performance is the key factor in the reductionof stress and chances of lawsuits. Multidisciplinary meetings, tumor boards,grand rounds, morbidity and mortality meetings, conferences, seminars and symposium are all very helpful in enhancing knowledge and skills andare problem solving in complex and atypical cases.

One important aspect for acquiring knowledge, development of proficiency and improvement of practice is critical thinking and reflecting[8] upon intentionally upon one'sprofessional behavior and progress. This inculcates a deliberate attempt to learn from experience, readiness to employ constructive activity when confronted with complex or unusual problem and finally seriously reviewing one's own postulations or beliefs regarding the problem. It is a key requirement under the renewed concept of professionalism.

Another important and helpful component of the process of reflection over a period of time is the development of portfolios which provides the evidence of attainment of knowledge, skills, professional attitudeand growth.

It is important to engage breast imaging specialist to educational practice because these individuals are likely to attract junior residents to the field through mentoring, clinical experience and providing research opportunity. In a survey by Baxi et al.[9] among the residents interested in breast imaging fellowship one third had a mentor, the result suggested that mentoring commitment of the faculty may foster interest in the field among residents.

The existing shortage of radiologist in the country also has a negative impact on enrollment of fellows, since the radiologist are in such demand that the benefit of a fellowship in finding a job has diminished. This needs to be counteracted by motivation targeted to academic settings such as part time opportunities which may be of interest to women with childrearing responsibilities. Other incentive[10] which may be introduced to enhance this women imaging workforce include flexible schedules with predictable and controllable working hours, improved workload and practically no or a few on call Finally to improve the competency and success of the fellowship program in the context of social, scientific and educational challenges, use of e-learning strategies is mandatory. It is a useful aid in teaching and provides a blended learning educational experience. In this fellowship program it will be used in the form of dedicated tutorials, lectures, homework assignments and self-assessing modules. Discussion boards provide a medium for the discussion of unusual and atypical case.

Conclusion

A number of factors contributing to the lack of interest in pursuing career in breast imaging have been identified with the most crucial being mal practice litigation and job related stress and the possible solutions are presented. Different measures can be implemented to solve and overcome these issues like improving and implementing new strategies of the teaching and learning process which enhances clinical competence and professionalism along with psychomotor, cognitive and affective development. It is critical that we begin to concentrate on these issues without delay so that training programme can provide sufficient number of skilled, knowledgeable physicians in the future.

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