Reflections on setting up forensic odontology department, its activities, and faculty

Forensic odontology in India is on the rise. Interest in this field has grown exponentially in the last 15 years or so. Dental/medical institutions – private and government – have employed exclusive and full-time forensic odontologists or dentists certified in the subject; these institutes are also setting up separate independent departments.

The Department of Forensic Odontology at SDM College of Dental Sciences, Dharwad - the first of its kind in the country - was initiated in 2006. The department works independently of oral pathology, oral medicine, and forensic medicine. However, it collaborates extensively with almost all other departments within the college in research, teaching-learning activities, and forensic casework. It provides opinion to cases referred by not only the police and government agencies but also dental colleges and forensic medicine departments from around India and abroad. However, four walls, a roof, furniture, and equipment are incomplete without appropriate human resource. It is, therefore, important to underline that the presence of adequately trained and qualified dentists is the bedrock of such an exclusive department. Faculty in forensic odontology have three primary functions: (1) teaching-learning activities, (2) research, and (3) casework.

Teaching-Learning Activities

The most important function of the department, perhaps, is student teaching-learning. The DCI 2007 regulations (http:// dciindia.gov.in/Rule_Regulation/Revised_BDS_Course_ Regulation_2007.pdf), to which this author contributed in terms of forensic odontology curricula, states that there is need for about 10 h of lectures in III and IV BDS, which should be supplemented with about 20 h of practical exercises; this author believes that week-long electives on forensic odontology for interns allow those interested to gain additional knowledge. In addition to teaching undergraduate students, postgraduate students may also be allowed to have such elective programs, while the departments of oral pathology and oral medicine may mandatorily depute their students for forensic odontology postings. Once the department and its faculty have sufficient experience in forensic dental teaching-learning activities, research, and casework, it may then venture to train dentists beyond its own institution. Forensic Odontology Department, SDM College of Dental Sciences, has been organizing training programs since 2013, which served as the precursor for the contact program of the Indian Association of Forensic Odontology's Indian Board of Forensic Odontology Fellowship program (commenced in 2014–2015) and subsequently several other forensic odontology programs in India. The department's current offering is a certificate program in forensic odontology under the banner of its parent SDM University.

Research

Research work in forensic odontology can explore the simplest and basic topics such as age estimation, bite mark investigation, dental identification, and sex prediction. What matters in research is not necessarily to undertake something new and different (that, no doubt, has its novelty) but to look at the basic problems encountered in day-to-day forensic odontology work; what is vital in research is the use of sound methodology, including appropriate statistics (and to know how to interpret the obtained results). This facilitates gaining in-depth knowledge and skills by the faculty in specific areas within forensic odontology. The published research should be incorporated in the student teaching–learning activities and also in forensic dental casework referred to the department.

Casework

The biggest challenge for an exclusive forensic odontology department is to attract appropriate forensic dental cases. Such cases would be referred either by police or a variety of government offices; it is not uncommon for laypersons to seek expert opinion, either (e.g., in age estimation). While government institutes should not have an issue with forensic odontology referrals, private institutes may. This is where some form of government recognition may be useful. This author's dental college is part of a private organization. In 2008, it made an application to the Government of Karnataka's Home Ministry for recognition as a "state referral center." Considering that the forensic odontology department in Dharwad was a one-of-a-kind facility at the time, the institution was recognized by the Home Ministry of the Karnataka Government as a "state referral center" in October 2010, following the recommendations of then Director General of Police and inspection by the Director and Deputy Director of Medical Education. However, such government recognition, while useful, is not mandatory for cases to be referred to private institutions. This author is aware of two renowned dental colleges in Davangere in Karnataka – both private – which routinely provide opinion in police cases. Hence, it may be essential for the forensic odontology faculty in private institutes to highlight their expertise to the police and periodically follow-up on this; for the police, it may be necessary that they develop sufficient confidence that the concerned private institution can render competent opinion in forensic dental cases.

Now, the question arises as to who can handle forensic odontology cases. As per this author's understanding, legally, any registered dentist in India may serve as an "expert" in matters concerning forensic odontology cases. However, it is crucial that such dentists have gained adequate knowledge and skills in forensic odontology to prepare them to handle police cases, analyze dental evidence using appropriate and standard methods, and present them in the form of well-written forensic reports and testify in court. To this effect, training in forensic odontology is paramount, which may be obtained from abroad or within India. Full-time forensic odontology courses are available abroad in the University of Adelaide (Australia), University of Western Australia, University of Dundee in Scotland (UK), and Katholieke University in Leuven (Belgium). The qualification offered by one of these (University of Adelaide) is recognized by the DCI as "an additional qualification equivalent to PG Diploma awarded by Indian Universities" (PART III [Sub-section (4) of Section 10] of the Schedule to the Dentists Act, 1948 [16 of 1948]). Currently, there are two dentists in India who have such DCI-recognized qualifications, and one of them is registered as a "forensic odontologist" in the State Dental Council.

In India, apart from SDM University's certificate course, DY Patil University, Mumbai, People's University, Bhopal, the Indian Dental Association Head Office, Mumbai, and the Indian Association of Forensic Odontology have initiated 1-year fellowship programs. Two-year full-time MSc courses in forensic odontology are also available in Gujarat Forensic Sciences University, Gandhinagar, and JSS Academy of Higher Education and Research, Mysuru (Karnataka). Manipal College of

Dental Sciences, Mangalore, and Mar Baselios Dental College in Kothamangalam (Kerala) have both initiated 6-month certificate programs. However, none of the courses offered in India are recognized by the DCI and most of them are intended to give additional theoretical and hands-on training to the dentist and help them in teaching assignments, research, and assist in police cases. The fellowship and certificate programs are probably better suited for those with an MDS or private practitioners who want to get more knowledge and skills in forensic odontology. For young and recently graduated dentists, these courses would be useful as a stepping stone to forensic odontology and serve as preliminary courses to pursue before embarking on full-time forensic odontology courses abroad; alternatively, they may complete multiple forensic odontology courses within India to gain a 360° view of the subject and increase their prospects of job opportunities. Ultimately, what is most important for dentists inclined to work in forensic odontology is that they demonstrate appropriate training (which includes adequate exposure to forensic dental casework), sufficient experience in forensic odontology research, and suitable exposure to teaching-learning activities.

Ashith B. Acharya,

Department of Forensic Odontology, SDM College of Dental Sciences and Hospital, Shri Dharmasthala Manjunatheshwara University, Dharwad, Karnataka, India E-mail: ashith.acharya@sdmcds.edu

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