Relevance of innovative course modules for teaching tooth morphology in today’s scenario

Madam,

With interest, we read the recently published letter by Dr. Chowdhry and Dr. Sircar, “Need for innovative course module for teaching tooth morphology in India.” We ourselves as oral pathologists, and many of us working in dental education institute, completely agree that oral pathologists have the responsibility of teaching tooth morphology.

However, (with due respect), we would like to state that the authors have seemed to have missed the complete picture in proposing innovative teaching methodologies such as the use of videos, computerized three-dimensional (3D) models and mobile applications such as 3D tooth anatomy. There has been a similar lasting debate around the curriculum of dental anatomy carving among not only the oral pathologists but also different specialties in dentistry, whether to continue it or not. Several contemporaries believe that carving serves no purpose in the present-day context; it is tiresome to teach; learning tooth morphology can only equip a student to become a good technician; dental students can become skilled surgeons even without learning tooth morphology; crown carving may help in practice, but root carving is waste of time, energy and kilos of wax; it may only increase the risk of failing in practical examinations and it switches dentistry from being a biological science into a mechanical science.[1-4]

We all agree and it is a proven reality that dentistry is not only a science, but also an art, both mechanical and esthetic, intending at function and beauty, respectively, and requires dental practitioners to demonstrate artistic flair like a sculptor. The dental hard tissues, especially the enamel, once damaged cannot be repaired and remodeled, and dental practitioners are required to carve the direct restorations accurately within tooth structure which cannot amend according to the functional demands, like other hard and soft tissues in the body. Hence, the restorative dentistry requires a thorough knowledge of the tooth morphology and manual dexterity (which can only be mastered by practice) to ensure an adequate form, function, esthetics and longevity of restorations. Improper restorations may cause displacement, lifting forces, rotation, weakening of the teeth, deflecting occlusal contact, food impaction and more detrimental periodontal damage, interdental bone loss and temporomandibular disorders. Acquaintance of tooth morphology also aids in the prevention of dental diseases, endodontic and orthodontic therapy, forensic investigation, anthropological studies, fabrication of fixed and removable prostheses and even for simple procedures such as scaling, placement of rubber dams and matrix bands[5] and engaging the extraction forceps beaks. The knowledge of dental anatomy is also crucial in periodontal procedures such as root planing, crown lengthening surgeries, apicoectomy, root resection and hemisection. Ever-increasing demand of cosmetic and esthetic dentistry makes it all the more important to understand the fundamentals of tooth carving. Moreover, it helps to master the instrument grasp and to identify substandard laboratory work.

In short dental anatomy, discipline prepares students for the clinical disciplines that will require this ability. Hence, tooth carving can be considered as an age old but proven method of knowledge translation, which helps to hone the skill and boosts confidence as a practitioner. All these grounds mandate the learning of carving. Auxiliary teaching methods such as audiovisual aids may increase the students’ interest in the subject but not the manual and cognitive skills.

We wholly agree that in COVID-19 lockdown crisis, we were forced into a virtual world of teaching through different applications and devices, and as far as the theoretical teaching/pedagogy is concerned, they are offering much help. However, the big question still remains unanswered: how much knowledge is being actually received and translated by the receivers? Having said this, going “old school” is still necessary for integrating theory and practice, hands-on experience, practical exercises and also for acquiring various soft skills such as developing interpersonal communication, building positive teacher-student relationships and most importantly, peer learning. After all, we are preparing future dentists not only for today but also for the postpandemic epoch.

Things are settling back to normal with the reopening of dental colleges,[5] and plethora of challenges still remain...
with respect to social distancing and prevention of spread of epidemic. However, by following scrupulously, all the available SOPs/guidelines and with the recent vaccination drive, we hope to conquer over the pandemic in coming time. Hence, the hustle of the COVID emergency should not affect the dental anatomy and dental histology practical curriculum of 125 practical working hours as assigned by the Dental Council of India in revised course regulations 2007.

We will conclude with a quotation, as rightly said by Confucius, “I hear and I forget. I see and I remember. I do and I understand.”

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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How to cite this article: Gotur SP, Wadhwan V. Relevance of innovative course modules for teaching tooth morphology in today’s scenario. J Oral Maxillofac Pathol 2021;25:23-4.
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