Oral health education for medical students

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With a view to improving oral health in Oman, particularly in the interior of the country where dental services are very scarce, medical students have been receiving a grounding in this field since 1988. The results achieved so far have proved encouraging.

There is a great scarcity of dental services in the interior of Oman and the country has no school of dentistry. For these reasons it was decided that students in the Faculty of Medicine of Sultan Qaboos University should be trained in oral and dental health care. In 1987 the Department of Oral Health was established with the objectives of providing:

- primary dental care for medical students and for university and hospital staff and their dependants;
- a programme of lectures on dental health, oral hygiene and the prevention of dental disease for first-year and second-year medical students, and, optionally, for students in other faculties;
- a one-week training programme for second-year medical students on dental and periodontal diseases and their prevention, followed by field work and an oral health survey in a village;
- a one-month clinical programme in the oral health clinic for sixth-year medical students, so that they would increase their knowledge of oral and dental diseases, oral manifestations of systemic disease, and treatments.

One-week training programme

In January 1988 a course for second-year medical students was introduced during which they learned how to examine the oral cavity, recognize the appearance of a healthy mouth, and diagnose pathological changes in hard and soft tissues. After three days of intensive training through lectures and practice, the students were divided into supervised groups and conducted an oral health survey among the inhabitants of a village. This programme, which has been repeated in every subsequent year, proved an excellent introduction to the examination of patients and a useful preparation for the clinical programme.

Clinical programme

The clinical programme for sixth-year medical students embraces oral health seminars, specialist seminars, hospital experience, clinical presentations, hands-on clinical experience, and laboratory techniques.

Oral health seminars

Oral health seminars are held on most days during the clinical period and they normally last an hour. The subject matter of the lectures delivered in the second year is reviewed and the following matters are also covered:

- classification of cavities/restoration of teeth;
- local anaesthesia in dentistry/pain following extractions/dental haemorrhage;

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- extraction of teeth;
- replacement of missing teeth;
- dental materials;
- dental laboratory techniques;
- endodontics/apicectomy;
- oral manifestations of systemic disease;
- leukoplakia/chronic mucosal disease and carcinoma in the oral cavity;
- orthodontics;
- oral surgery procedures;
- dental implants;
- orofacial pain;
- staining of teeth.

Special attention is paid to oral manifestations of systemic disease, the treatment of dental emergencies, and questions related to dental matters which doctors are likely to be asked by their patients.

**Specialist seminars**

Specialist seminars, conducted by persons from outside the Department of Oral Health, cover the following subjects:

- anatomy of the jaws and oral cavity;
- infections of the mouth;
- radiation hazards in dentistry;
- dental radiographic techniques;
- traumas of the face and jaws.

**Hospital experience**

The students spend two mornings a week at a maxillofacial centre, where they see a wide spectrum of oromaxillofacial surgery and pathology and observe trauma cases resulting from road accidents.

**Clinical presentations**

Each student may choose a subject for study and eventual presentation to fellow students and members of the oral health clinic. After each talk, questions are asked and a discussion takes place, and a clear indication is thus obtained of the student’s knowledge of the subject.

Alternatively, a patient may be presented together with a case history, radiographs, photographs and models of the jaws. A diagnosis and treatment plan is suggested by each student, and this demonstrates their grasp of problems and solutions.

**Hands-on clinical experience**

The students are taught about difficulties encountered in simple dental treatment. They are expected to perform a wide range of clinical procedures under strict supervision and to assist with complex forms of treatment. They are not permitted to use rotary cutting equipment in the mouth but they use both turbine and slow-speed drills to cut cavities and perform root fillings in extracted teeth. The procedures are recorded by the students in logbooks, and the entries are signed by staff members. Each student has a tutor who observes her or his progress and gives help or guidance when necessary.

**Laboratory techniques**

Time was allocated for the students to visit a dental laboratory where they were able to see the construction of crowns, bridges and prosthetic appliances and witness the very high degree of skill and accuracy which is required in this work.

The training has given students a heightened interest in and knowledge of oral and dental diseases and an awareness of the importance of preventive action. In the Capital Area of Muscat it is intended to establish a school of oral hygiene where hygienists and dental therapists will be trained to provide most rou-
tine dental care. Consultant dentists in hospitals and clinics will be able to refer patients to these ancillary workers except in complex cases where extra skill and experience are required. In the interior, however, doctors trained in oral and dental health care will continue to examine patients and refer them for treatment. Medical clinics are organizing oral health education for expectant mothers and the examination of children's teeth during routine visits. This can be expected to reduce the incidence of dental caries considerably.

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Oral manifestations of HIV infection

Oral lesions in HIV-infected individuals are frequent and varied and are among the first symptoms of infection. Moreover, the presence of pseudomembranous oral candidiasis and oral hairy leukoplakia indicates a strong likelihood that the HIV infection is progressing towards AIDS. It is not surprising that early indicators of immunodeficiency occur in the oral cavity: concurrent immune suppression allows normally non-pathogenic microbes to proliferate, resulting in characteristic oral lesions.