

CAREER FOCUS

Oral And Maxillofacial Surgery

AJ Gibbons, JM Baden, MD Williams

Introduction

Oral and Maxillofacial Surgery is the youngest of the nine surgical specialities recognised by the Senate of Surgery of Great Britain and Ireland. To be appointed as a consultant in the speciality, clinicians are required to have dental and medical degrees, hold the qualifications Member of the Faculty of Dental Surgery (MFDS) and Member of the Royal College of Surgeons (MRCS) and to have passed the Fellow of the Royal College of Surgeons Intercollegiate Oral and Maxillofacial Surgery exit examination (FRCS OMFS). This extensive training takes around 18 years to complete and creates a surgeon both competent and experienced in all aspects of head and neck surgery (1).

Military trainees are usually selected from junior clinicians within the armed forces. They should have spent at least a year in general duties posts and during that time have shown commitment to their respective Service. In special cases, civilian trainees may join a military training pathway at any stage but are expected to undertake some periods of general duties to gain broader experience of Service life. Appropriately trained maxillofacial surgeons may enter the military at consultant level. However, all civilian trainees and consultants must pass initial officer training. The tri-Service maxillofacial surgery cadre is comprised of less than 20 consultants and trainees. Each Service maintains its own ethos but as part of such a small speciality, individuals are encouraged to collaborate on a tri-Service basis wherever possible.

Oral and Maxillofacial Surgery

Oral and Maxillofacial Surgery involves the diagnosis and treatment of diseases affecting the mouth, jaws, face and neck. The scope of the speciality is large and includes facial injuries, facial disproportion, head and neck cancers, salivary gland diseases, temporomandibular joint disorders, the removal of teeth, facial pain, cysts and tumours of the jaws and management of diseases of the oral mucosa. The dual dental and medical qualifications and surgical training give the oral and maxillofacial surgeon the unique anatomical basis and surgical skills to provide a comprehensive service. Therefore, they are able to provide a treatment that was

previously fragmented between ear, nose and throat surgery, general surgery, plastic surgery and dermatology. A multidisciplinary approach is essential in the management of many complex conditions and maxillofacial surgeons are now established members of cleft lip and palate, craniofacial, and head and neck cancer teams.

History

The concept of military maxillofacial surgery was developed in the British Armed Services during World War I. In 1915 Major Charles Valdier, a French dentist given an honorary commission in the British Army and an Armenian dentist from Harvard called Kazanjian set up a unit to treat maxillofacial injuries at Wimereux in France. They were joined by Captain Harrold Gillies, a New Zealand general surgeon, who decided to devote himself to the reconstructive management of injuries to the face and jaws.

Gillies set up his own maxillofacial unit in Aldershot in 1916 under the command of Colonel Sir Arbuthnot Lane. The unit received 2000 major maxillofacial injuries from the Somme in only 10 days. It was over this period that the concept of interdental occlusion as the key to proper reduction of fractures, and the use of dental splints, was developed.

World War II also saw great improvements in the management of maxillofacial injuries. Reconstructive techniques were further developed with the use of bone grafts and tubed pedicles. Sir Archibald McIndoe, another New Zealand Surgeon and cousin of Gillies, pioneered much of this work at East Grinstead Hospital. Antibiotics became available and stainless steel wires were used for the first time to directly fix bone fragments. Extra-oral fixation devices were also introduced. Since World War II further developments in surgical techniques, equipment, antibiotics, imaging (Figure 1) and anaesthetics have taken place. Improved techniques for the internal fixation of maxillofacial fractures with bone plates evolved, and the use of free tissue transfer using microvascular techniques greatly improved the possibilities for soft tissue reconstruction (2).

Until the 1960s most oral and maxillofacial surgeons were only dentally qualified. However, with advances in

Wg Cdr A J Gibbons
MA (CANTAB)
FDSRCS FRCS FRCS
(OMFS) RAF
Consultant in Oral &
Maxillofacial Surgery
Peterborough District
Hospital,
Cambridgeshire,
PE3 6DA
E-mail: andrew_gibbons@hotmail.com

Surg Lt Cdr J M Baden
BMSc MBBS
FDSRCPS RN
Senior House Officer in
General Surgery
Derriford Hospital,
Plymouth, Devon,
PL6 8DH

Lt Col M D Williams
FDSRCPS MRCS
AFRC FRCS (OMFS)
RADC
Consultant in Oral &
Maxillofacial Surgery
Eastbourne District
General Hospital,
East Sussex,
BN21 2UD



Fig 1. Three-dimensional computed tomography reformation of mid-face fractures.

surgical techniques and technology it became more and more desirable for clinicians to be medically qualified as well. Since the mid 1980s it has been mandatory for all newly appointed maxillofacial consultants to be both dentally and medically qualified.

Training

Oral and Maxillofacial Surgery has the longest of all surgical training pathways but develops mature surgeons with an unparalleled ability to maintain, repair and reconstruct both hard and soft facial tissues.

Most trainees obtain a dental degree as the first step in training. They then undertake a vocational training year in general dental practice. In the military this is usually on an active station, ship or barracks and gives them a good grounding in military life. Over the next year, the trainee should pass MFDS part A, before applying for a Senior House Officer (SHO) post at a Military District Hospital Unit (MDHU). Whilst in this post the trainee is assessed for further training. Essential qualities looked for are manual dexterity, good communication skills and a sound examination record. If selected, the trainee should pass parts B and C of MFDS prior to applying to medical school.

Throughout surgical training, trainees may take advantage of military management and leadership courses. The additional skills acquired make the trainee a valuable member of any team and enhances their curriculum vitae. Trainees may also take part in military sport and adventure training when time permits.

An increasing number of medical schools are allowing dentists with MFDS to take a 3 year condensed medical course. On completion of their medical degree they undertake a registration year and then 2-3 years of basic surgical training to attain the MRCS. This training is usually but not

exclusively done at an MDHU. For dental graduates, there is no concession for part A of the MRCS, as there was to the FRCS, except that their time spent as a maxillofacial senior house officer may be included (3).

Military maxillofacial surgeons, on rare occasions, may train in Medicine first followed by vocational medical practice and hospital posts. They can then apply for training within the specialty after assessment at both an MDHU and by a civilian consultant adviser. If successful they usually enter a shortened dental course of 3 years. After completion of dental vocational training they spend at least a year as a maxillofacial SHO in order to complete MFDS. If a medical degree is taken first the MRCS can be taken before or after attending dental school. Nevertheless, it must be passed before applying for higher surgical training.

A particular benefit of military maxillofacial training is the sponsorship at full pay through the second degree. Trainees may be expected to fill the odd military locum job during vacations but this is not onerous. Undergraduate electives offer a good time to gain additional maxillofacial skills, whilst still being paid (4).

For a military surgeon to attain a higher surgical training number he must be accepted at interview alongside his civilian colleagues. Higher surgical training in the specialty is 5 years and all training is undertaken in approved rotations. Most rotations are in National Health Service (NHS) posts but there are facilities to undertake part of a rotation in an approved MDHU post. On-call commitments at specialist registrar level are generally no more than 1 in 5. Given the age of trainees, many of whom are married and have children by this time, moving from one hospital to another may involve domestic upheaval. However, this is not uncommon in general service life and the military can help with locating and renting housing.

The Defence Postgraduate Medical Deanery sponsors attendance at courses and conferences. The funding is far more generous than that received by NHS trainees.

Progress in training is formally assessed at yearly Record of In Training Assessments (RITA) in parallel with NHS trainees. The Service Consultant Adviser attends these interviews and with the relationships built up over many years also acts as a mentor, another key benefit of military training.

Trainees are encouraged to apply for Fellowships for sub-speciality training either in the United Kingdom or overseas but this should be planned early in close liaison with civilian and military deans and be approved by the Specialist Advisory Committee.

The last examination hurdle is the Intercollegiate FRCS in Oral and Maxillofacial Surgery. This is usually sat at the end of the fourth year and is limited to three attempts. Success in the exam and a satisfactory end of fifth year RITA assessment leads to the issuing of a Certificate of Completion of Specialist Training. Before being appointed as a consultant in oral and maxillofacial surgery the trainee must then successfully pass their Armed Services Consultant Appointment Board interview.

Military Maxillofacial Surgery

16% of injuries sustained in battle by British Service personnel involve facial structures. The war role for maxillofacial surgeons is to manage these patients either in the Primary Casualty Receiving Ship (PCRS) RFA ARGUS or in the field hospital as part of head and neck surgery teams. The main emphasis is placed on stabilising the patient for rapid evacuation to hospitals outside the conflict zone where definitive surgery can be performed. Nevertheless, in modern war many of the patients seen and treated are either civilians or enemy combatants and definitive surgery may have to be done in less than optimal conditions. Although modern techniques of plating facial fractures should be used when indicated military surgeons must be able to use simple traditional alternatives such as wires to stabilize fractures.

Malfunctioning equipment and poor re-supply of used parts in conflict zones must be planned for. Trauma training in non-first world countries can be extremely beneficial for military surgeons (4). Advanced Life Support training and basic surgical training allow the maxillofacial surgeon to assist colleagues in other surgical disciplines when necessary.

In peacetime the role of the military maxillofacial consultant is to keep Service personnel fit for duty. Military consultants are mostly based at MDHUs but in agreed situations may be posted to NHS hospitals. A consultant practice is usually 40% military and 60% civilian depending on local circumstances. The greater integration with civilian colleagues allows the development of sub-speciality interests. Most military maxillofacial surgeons have a subspecialty

interest in trauma care and often become lead clinicians in maxillofacial trauma care in their hospitals.

Private practice is permitted within the military surgeons' job plan and scope does exist for maxillofacial surgeons to transfer to the military management spine. However, after 18 years of training most consultants are generally keen to continue to pursue a clinical career within the speciality. NHS management opportunities are available to military surgeons in roles such as Lead Clinician or Surgical Director. Appointments as single Service or Tri service Consultant Advisers offer further prospects for military promotion and clinical based management roles.

Conclusion

Military Oral and Maxillofacial Surgery can offer a rewarding and challenging career to an enthusiastic individual who has a good academic record, good communication skills and a good 'pair of hands'. The long training pathway is fully sponsored and as a member of a small surgical cadre, mentoring and support in training is excellent. Consultant practice includes treating both military and civilian personnel and sub-speciality interests and career development are encouraged. In general, military maxillofacial surgeons' knowledge of trauma surgery, man management skills and extensive training make them valued members of their units and hospitals.

References

1. Akhtar, S. Lloyd, CJ, Oral and Maxillofacial Surgery. *BMJ* 2000; **320**: S2-7242 (22 April).
2. Gibbons AJ, Patton DW. Ballistic Injuries of the Face and Mouth in War and Civil Conflict. *Dent Update* 2003; **30**: 272-278.
3. Kim DS, Gibbons AJ, Monaghan AM. Will maxillofacial surgeons remain dental surgeons first? *Br J Oral Maxillofac Surg* 2003; **41**: 204.
4. Gibbons AJ. A Decade of experiences in South African trauma units as a visiting British Royal Air Force maxillofacial surgery trainee. *International Review of the Armed Forces Medical Services* 2003; **76**: 97-104.