ORTHODONTICS IN THE ARMY*

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It is my pleasure and privilege to describe the position held by this discipline some four
years following the decision of the Army Medical Directorate to recognise that ortho-
dontics demanded some separate and individual consideration within the overall dental
field of care. This recognition took form by making arrangements whereby some officers
were invited to obtain that standard of knowledge and qualification required of civilian
dentists for specialisation in this particular field. Further, having so qualified, one of
them was appointed as Adviser in orthodontics so that this new venture should not
wither from disinterest should it prove of value to the Army. Orthodontics within the
general field of dentistry is undeniably of great importance and has developed steadily
of recent years to assume a major standing, but it was, and indeed still is, not fully
accepted that it has a place in the field of military dentistry. My purpose is to establish
that orthodontics has such a place and to explain how the facilities which have been so
far developed are used, or can be used, by Dental Officers.

In common with all branches of the Army Medical Services, the Royal Army Dental
Corps has to solve the problem presented by the existence of families and dependants
who form such a large part of every service community. The degree of responsibility for
their care varies with the geography of their location, and the thorny problem of allocation
or division of professional attention between civilian and military needs has not yet
proved capable of solution. The original concept of our Corps was to produce dental
fitness in every soldier and this must remain the prime aim, but the situation is nowadays
complicated by the military acceptance of families as an integral part of service life. In
the United Kingdom it is comparatively easy to direct the greater part of our effort
toward the soldier, since the umbrella of the National Health Service covers the civilian
element mentioned. Outside the United Kingdom the Army Medical Services necessarily
act for families as their National Health Service, and in fact do so at a very high standard
indeed. General practitioner and specialist service is readily available, and within
dentistry there is no exception, so that orthodontic care is provided in the same way as
obstetrics or paediatrics.

Because interest in and systematic study of orthodontics has arisen widely only
during the last twenty years, the army situation is not dissimilar to that in civilian
practice, with an increasing number of patients demanding attention from quite
a small band of orthodontists. We have a further difficulty in that treatment time for a
service or civilian patient is the same, but in our case patients move around with postings,
both within and between Commands. When these movements are between overseas
stations and the United Kingdom, responsibility for continuing care passes from
military to civilian authority; similarly, patients may present overseas on transference
from a civilian practitioner. Our service efforts to minimise any adverse effects which
may be incurred by such movement will be discussed later.

Dental officers overseas will inherit a centre or department which assumes of
necessity a slant toward the treatment of wives and children, and hence becomes more

* Originally presented as an address to officers on first entry to the Royal Army Dental Corps (1967).
involved with orthodontic problems than those at home. The latter, however, may frequently have under their care boy soldiers, junior leaders and others in their early teens, or children from army schools. By these remarks I do not wish to seem to exclude treatment of older patients, for many of them present orthodontic problems, whether of previously untreated malocclusions, collapsed arches for which fixed bridges are being considered, or temporomandibular joint dystrophies which can have an occlusal dis-harmony as aetiology. Requests for attention to dental irregularities or findings during statutory examinations will provide an abundance of orthodontic problems for your consideration. These problems are indeed those of all dental officers for practice in the Corps is complete and without restriction of clinical activity. Many problems will appear to be, and will be, capable of resolution with simple treatment. Some will present a more complex picture and occasionally an apparently simple solution will lead to a worsening situation or even a mutilation of the dentition. This is no denigration of competence, for you will know of the very true saying, that the operator who has never broken a tooth is one with very little clinical practice to his credit. In the same vein, even the most astute and experienced orthodontist will have erred in his past judgements and pray that some cases will never come to the notice of his colleagues.

Within all disciplines of medicine, it is accepted that the possibility of error is reduced with careful specialist training and practice, hence there have arisen specialists and consultants in each field. We have wisely followed this course and now have some officers trained, qualified and practising orthodontics. They are available for advice or assistance with any problems previously described, or to undertake tedious and difficult treatment courses calling for the more sophisticated amenities at their disposal. Within each Command or Area there is at least one such officer and dental officers are invited to make use of his services as fully as they wish. In the best interests of all patients it is most strongly recommended that they do so; professionally it is only wise to use any available resources. Requests may be for advice, for assistance with diagnosis and treatment planning, or for total transference of patient care as circumstances may dictate.

The basis for 'Army Orthodontics' is to create a field of broad uniformity in thought leading to diagnosis, and treatment planning, so that our patients may avoid the dangers inherent in frequent movement occasioned by postings, between the sphere of influence of different orthodontists, whereby reversals of treatment courses could occur. All our orthodontists have received training from the same school of thought, endeavouring to be free from dogma, free from any particular mechanical system, directed only toward informed and intelligent diagnosis. From the diagnosis will follow a treatment plan which may be carried out in any one of several ways, but preference will be shown for the simplest method of achieving a successful result in the hands of the particular patient and operator.

Our orthodontists maintain contact one with another and keep abreast of the most recent views and procedures, the latter with any assistance that the Adviser can provide. They also try to establish communication with the dental officers in their sphere of influence, partly that they may come to learn what advice or treatment recommendation may offer best chance of success in a particular operator's hands. There are in most cases several ways in which a desired result may be achieved, but frequently that which is infallible for one may prove useless to another. This is analogous with surgery, where
you will know that one operator successfully exposes and delivers a buried tooth with chisels and elevator, whilst another shows equal dexterity with burs and forceps—often neither can achieve his accustomed standard with the alternative equipment.

Within our chosen broad standardisation there will always remain the many personal variations and idiosyncrasies, without which we should be very much the poorer. It is always pleasurable to eavesdrop on a discussion over differences in detail between any two specialists, but never have I known the opportunity to do so arise more frequently than when orthodontists meet. However, since our particular group of orthodontists have been encouraged to base their analyses on the same physiological principles, they will be largely in agreement regarding fundamental matters, so providing that harmony of diagnosis and planning which I have indicated as desirable and indeed essential for our services.

The factor of time is of great importance in orthodontics, not only regarding the actual timing of the commencement of treatment, but also for its shortest possible duration. In most instances it will be possible to assess a period of patient co-operation, to some extent varying with personality, but rarely should an expectancy of more than two years be counted on. This is much less reliable under our conditions where patients move so frequently, so that there will arise perhaps more instances than in the civilian field where it is advisable to give consideration to a compromise result. This will not be translated as a reduction of standard, but a common-sense acceptance that the ideal may be unattainable. This will also affect original planning, for frequently treatment plans which are suggested may appear to be divided into too many stages or be cumbersome. It will be found that in most instances this is quite deliberate, so that each stage will represent an improvement, be complete in itself and not susceptible to the possibility of complete failure should service conditions at any time make it impossible to achieve the whole original plan.

Use is made of both removable and fixed-appliance therapy, but the latter is retained in the hands of the orthodontists in most cases. One reason for this is the impossibility within our budget to make materials and equipment available to all, but a more important reason is that fixed appliance therapy can much more readily get out of control. It demands very careful study, planning and supervision so that the stored forces do not produce unexpected and bizarre results, or at least produce them less frequently. Treatment by removable appliances will be elected for the larger part of our practice, in accordance with the analysis and treatment plan from the orthodontist if his help has been sought. Frequently it will be found that more than one appliance is envisaged, since it is almost invariably wiser to plan each to do a small number of movements than to incorporate the whole into one appliance. Complications of the latter can produce a technical masterpiece but rarely will our patient be the prodigy willing to master its intricacies. One active spring worn as planned is much more valuable than ten which are pocket-borne.

I had not intended to slip in matters of orthodontic dogma, but meant the foregoing remarks to preface mention of the actual production of appliances. This is a matter for local circumstances to dictate, for in some places there will be no technician or laboratory immediately available. Also, the technician may have little or no experience of orthodontic work, and for successful appliances both design and finish must be to a high uniform standard. Uniformity, since at the chairside one should always be certain
that active principles of an appliance conform repeatedly and that the appliances will
always be of the same lightness, strength and smoothness. This allows of rapid, reliable
insertion and activation with accurate forecasting of results and of visit intervals. An
excellent prosthetic technician may not have the experience to know that the fitting surface
should be lightly polished to prevent irritations from accented rugae markings, since
our appliance differs from a denture by being active when inserted. There are other
differences such as the knife-edge contact line with teeth, eased free from the gingival
margin, the precision alignment of springs or screws, and some other details of technique.
I have digressed here so that it may be the better understood should the orthodontist
offer to produce an appliance in his own work-shop and forward it for insertion. Should
trained technical assistance be found locally these remarks may be disregarded, but
frequently it may be helpful to have co-operation in the design of appliances until a
little experience discloses the small but vital hints which may transform both the appliance
and one’s faith in the system.

Appliances need maintenance, for various reasons, and activation is the most
obvious one. In general, appointments are given for this at about three or four-week
intervals, partly since this is a suitable period for reactivation of springs, partly since
this is not too demanding on the patient, parent or school. In addition to maintenance,
which can be incorporated with routine care for the patient, this affords an opportunity
to correct distortion or breakage which occurs in many strange ways with children,
and also to ensure that the appliance is actually being worn. Lack of movement of teeth
will finally disclose this, but the condition of an appliance will frequently enable one to
spot the lack of co-operation sooner, and perhaps, to remove the cause for it.

All findings at a visit, whether of lack of co-operation, tooth movement, appliance
breakage and repair, inflammation or caries incidence, should be recorded at the time.
A special form has been produced for patients receiving orthodontic treatment, Army
Form I 8705, which has a number of panels used during diagnosis and treatment and on
which any orthodontist seen will have recorded his analysis and recommended treatment
plan. This form has been in use for several years now and experience suggests that
certain alterations may be desirable; it is, however, the current document and all officers
are asked to complete it carefully, both for immediate needs and for future analysis or
research projects. One point readily overlooked is a line on the form asking for the
patient’s date of birth, where it is all too easy to enter the current age. Even when the
form is completed and includes the date of the original visit, on a future occasion the
awkward calculation necessary to arrive at present age is time-wasting, and failure to
include the date is even less helpful. The box arrangement for clinical classification is
not for the purpose of a computer diagnosis, helpful though this may appear. It is so
that answers may be simplified as an arrangement of ticks rather than perhaps long
involved notes. Compromise is available by indicating marks between the definite
boxes, although in the main the simple questions can be answered positively. One answer
may require amplification and that is where the occlusal classification of the two sides
differs.

This form, any radiographs and the record models should travel with the patient
or be sent to any new location whilst treatment is current, and finally pass to the Registry
of orthodontic records. Patients who leave one officer should be told and given written
instruction on where to report for further treatment and a copy of the instructions sent
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to the receiving officer. It is surprisingly easy to go astray and all effort must be made to render this unlikely in any patient for whom further treatment or review is intended. Patients returning from overseas to the United Kingdom present even more difficulty and the assistance of the Area or Command orthodontist should be sought. We still have knowledge in many instances of how the patient may most successfully obtain continuation treatment, since he will know personally of the new area’s orthodontist or will arrange that the help of the Adviser at the Registry is available.

I hope that this brief account of a new, minor division of dentistry within the Corps will stimulate an interest, for often it is not realised just how much benefit may be gained for a patient.

ROLL OF COMMISSIONED OFFICERS IN THE MEDICAL SERVICES
OF THE BRITISH ARMY, 1660-1960

The Wellcome Institute of the History of Medicine is shortly to publish in two volumes the first complete Roll of the Commissioned Officers in the Medical Services of the British Army. The first volume consists of a reprint of Johnston’s Roll, which has entries for all the officers in the Army Medical Services from the accession of George II (1727) until the formation of the Royal Army Medical Corps, 23rd June, 1898. Only 250 copies of this Roll were originally printed during the First World War (1917), and it is now so rare that it is often difficult to find even in large libraries.

In 1925 one of Colonel Johnston’s collaborators, Colonel Peterkin, supplemented the Roll with a similar list of medical officers serving between 1660 and 1727. This has become even more difficult to find, and is therefore reprinted as a preliminary to Johnston’s Roll.

Volume II of the work, which is much more extensive, consists of a complete list of the officers serving on Permanent Regular Army commissions from the formation of the Royal Army Medical Corps until 1960. The foundations of this volume had already been laid by Colonel J. G. Foster, O.B.E., Colonel A. D. Young, D.S.O., wrote the introduction and Major L. C. W. Baker had had the task of compiling the biographical details. This work has been compiled under the direction of Lieutenant-General Sir Robert Drew, K.C.B., and he appears as the General Editor. These two volumes will provide the basic reference work for any historical studies on the Medical Services of the British Army.

The two-volume work to be published in the autumn will be available to serving and retired officers late R.A.M.C. and R.A.M.C. at a specially reduced price of £6 6s. 0d. These officers should forward their orders to the Secretary, Regimental Headquarters, R.A.M.C., Royal Army Medical College, Millbank, London, S.W.1., cheques made payable to the R.A.M.C. Corps Mess Fund. Loose leaf Order Form enclosed.