A CRITICISM OF SCHEMES AND A NEW SCHEME FOR
THE DENTAL TREATMENT OF BRITISH TROOPS
IN INDIA.

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For some years past the strength of the Army has been appreciably weakened owing to the increasing number of soldiers who have become inefficient owing to bad teeth. Bad teeth have become, owing to many insidious reasons, a very considerable obstacle to the soldier's efficiency, and a recognised cause of invaliding from the Service. And, as the consideration of the question has given rise in the medical mind to difficulties of so intricate a nature and so various a description, so the interest evinced in its ultimate settlement must have become correspondingly intensified. Many attempts have been made to formulate a scheme whereby the cause of this inefficiency might be checked. Hitherto, owing to the imperfection of these attempts, no good results have been achieved, and I have been unable to discover amongst them any scheme which is likely, at all perfectly, to meet the requirements of the case.

The only practical attempt at combating the difficulties that have presented themselves consists in the universal extraction of decayed teeth, combined, when considered necessary by a Medical Board, with the supply of artificial substitutes. This attempt having now been thought unsatisfactory, the whole matter has arrived at the present time at an unprofitable deadlock, and conflicting opinions are heard on every side. Thus, soldiers are everywhere to be seen whose teeth present every stage of decay, and whose remnants of teeth render them entirely inefficient for active service.

At the present time large numbers of soldiers have been supplied with false teeth, and about 80 per cent. of the remainder are rapidly qualifying for false teeth. Soldiers have come to feel that they have a right to be supplied with false teeth, and this feeling is fostered by people in the highest positions, and presumably by public opinion generally. It is understood that those soldiers who have lost their teeth in the service of their country have an undisputable right to be supplied with artificial substitutes at State cost, and it is, indeed, only natural that when the unfortunate soldier has had all his teeth pulled out, he should look to his country to supply him with false ones. If a man loses his leg in the service of his country, it is only fair to advocate that he should be
supplied, at public expense, with a false one. The principle under­
lying such humane advocacy has now come to be applied to a
soldier who has lost his teeth. But there is a most important
difference between the two cases, namely, that whereas every effort
is made to save a soldier’s limb from amputation, no attempt has
ever been made to save teeth from extraction.

The present scheme of treatment, then, may be called the
“Forceps and Denture Scheme.” It is for those in authority to
judge as to whether the State, or humanity, has benefited in pro­
portion to the amount of money spent on the large number of
artificial dentures which have been supplied, as to whether the good
results of these dentures are likely to be permanent, and whether
these dentures have rendered their possessors efficient for active
service. The military authorities may be satisfied with present
results, public opinion, as represented by the casual observer, may
be satisfied, the patients themselves may be satisfied, and the
dentists may be satisfied, but no one who has any practical know­
ledge of dental surgery, who knows Service conditions and who is
working on behalf of the Government, can allow the present
forceps and denture scheme to continue. This scheme is of a
barbarous and antiquated nature, it is based on unsound surgical
principles, and no good can ever come of it. The principle under­
lying it is the same as that which would be acted upon by a surgeon
whose only idea of the surgery of a diseased limb was to amputate
it and supply an artificial substitute.

The practice of allowing teeth to decay till it becomes neces­
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sary to pull them out, provokes hostile criticism, which is inevitable
as a result of the tendencies of present-day teaching. However,
from whatever point of view this practice be regarded, it must be
clearly understood that the resulting false teeth can never be looked
upon as a necessity for soldiers. False teeth must always be looked
upon as a luxury to be enjoyed only by the rich. Whatever the
amount of benefit said to be derived by a patient happy in the
possession of a couple of sets of perfectly made and perfectly
fitting dentures, such benefit can only be regarded as one of the
numerous blessings afforded to the rich. Again, even the most
satisfactory and perfect false teeth must be considered, in almost
every case, merely as an expensive though more or less satisfactory
result of the neglect of the natural teeth. Also such gratification
is nearly always produced as much from reasons of vanity as from
reasons of health, although naturally, perhaps, the health reasons
are liable to be particularly extolled by the dentists. But be this
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as it may, it is extremely doubtful if many people are inclined to pay thirty guineas for a set of false teeth, none of whose part it is to enhance the appearance. People have always done well without false teeth if they cannot afford them. Forty years ago or so the skilful dentist did not exist. People then managed to attain a satisfactory age in serviceable condition without any dental treatment whatever, except perhaps that which was meted out to them by the village blacksmith. Therefore the expenditure of a large amount of public money on such questionable luxuries as artificial dentures, which have only become necessary through sheer neglect of the teeth, cannot longer be countenanced.

This scheme is fraught with expense and bad results, and if it is persevered with, will be found to breed abuses of every variety, and will also be likely to develop a state of affairs for which the term "laughing-stock" will be all too mild a description. The Government should not be induced to undertake the supply of artificial teeth on any pretext whatever.

The cause of the universal decay of the teeth is still unknown. No constitutional treatment has ever been shown to prevent or ameliorate the condition. But it is well known that the ravages of dental caries can be effectually stopped by means of conservative surgical methods, and the time has now fully come when the preservation of soldiers' teeth should no longer be wholly neglected.

Neglect of the teeth not only results, primarily, in an enormous amount of dental inefficiency, but also results, secondarily, in many forms of retrogression from good health. What sanitary expert can look upon his efforts with satisfaction when he regards the septic mouth of the soldier? Every disease is probably aggravated by bad teeth. It is true that there is no proof that any disease (except of the jaws) is caused by decayed and suppurating teeth, but there is nothing to prove that any disease is not either primarily caused by teeth, aggravated by them, or secondarily caused by lowering resistance. Present-day ideas of infection cannot exclude diseased teeth from the cause of any infection, the mode of entry of which is unknown. Moreover, one may go so far as to say that there exists hardly any pathological condition whatever in which either the patient himself, or his treatment, can be considered to be getting a fair chance, if the consideration and treatment of the state of his teeth should be lost sight of. Therefore conservative surgical treatment of teeth is urgently and essentially necessary for the Army, as a most important factor in the prevention of disease and of invaliding. By its introduction, dental inefficiency will become a thing of the
past, the health of the Army will benefit in many ways, and forceps and false teeth will be consigned to a well-merited oblivion.

But while Army surgeons and the medical profession generally will undoubtedly agree with the motives and principles here expressed, yet they will also undoubtedly ask who can be found to accomplish the requisite work. The training of the Army surgeon does not include conservative dentistry in any form, and therefore it would appear that the only course to take would be to employ a corps of Army dentists, to which suggestion there are many objections, some of which I will now proceed to discuss.

Now a first-rate dentist—and none others are any good—is a man of many arts. He is acquainted with highly specialised dentistry of every description. He can manufacture dentures of gold, silver or vulcanite. He is proficient in the use of porcelain. He can produce bridge and crown work of great variety. He can fill cavities in teeth with gold, porcelain, amalgams or cement. He can, by means of ingenious mechanical contrivances, regulate the position of misplaced teeth. In fact, his work abounds in technical skill of the highest order and of the greatest variety.

But I have endeavoured to show above that denture work of any kind should not be encouraged, and is, in fact, useless for the Army. To go further, it may now be stated that bridge, crown, gold, silver and enamel work, in fact, almost all the results of the high professional training of the dentist, are equally useless. Nearly all such ability and skill in treating soldiers' teeth would be entirely thrown away, whether considered from the point of view of humanity or of benefit to the State.

Again, if it is considered that dentists must be employed, it will be found that they must be highly paid for their services. They would require so much pay, that in comparison the Royal Army Medical Corps officers would be "nowhere." A scheme was mooted which suggested that four English qualified dentists, one, for each Command, would be sufficient to perform the dental work of the Army in India. It was suggested that each of these dentists, besides other duties, was to put the teeth of every British soldier in the Command, as far as practicable, into good order by examining them, and treating them if necessary, at least once yearly. Now there are about eighteen thousand soldiers in each Command. The dentist would therefore be required to inspect, and treat, if necessary, about fifty patients a day. And out of this number about forty would be likely to require treatment. Irrespective of many minor impracticable details, the amount of work indicated above, if
honestly attempted, is to be regarded as being absolutely beyond the power of any one man to perform. Roughly speaking, it would be found that twenty dentists for each Command would find their time well employed in such an enormous field of labour.

It was suggested, moreover, by this scheme that these dentists should work as civilians. Now, in the Army, the doctor is an officer of rank, and it is to be noted that in England the time is rapidly coming, if it has not already come, when any question of the difference of professional or social status between a doctor and a dentist will not be admitted. The dental profession has of late years made large advances in every direction. Every year sees the professional education of the dentist more nearly approaching that of the doctor. At the present time the preliminary education in arts, in anatomy, physiology, biology and chemistry is, I believe, exactly similar to that required of the doctor. The dental student even goes further, and is instructed in metallurgy and comparative anatomy. At a later stage their respective educational paths diverge, the medical student enters the wards of a general hospital and the dental student proceeds to his special work. But during this stage the dental student must attend lectures on general medicine and surgery, and he must further pay visits to the medical and surgical wards of a general hospital in order that he may be able to answer questions on those subjects which form a part of his final examination; whereas, it may here be noted, the doctor knows nothing of dentistry whatever, and no provision is made, at any rate compulsorily, for his instruction in that subject. Further, the closer alliance of the two professions has been one of the chief objects which the leaders of the dental profession have had in view for several years past. It is to be hoped that at some not too far distant date, the dental profession will become absorbed in the medical profession, and that every dentist, or tooth specialist, will be educated as a doctor in the same manner, for instance, as every eye specialist is. Therefore, it will be seen that there are strong reasons for maintaining that the stipulation, that the dentist should be employed in the Army as a civilian, would not be a popular one; and that it would not only not be productive of good feeling between members of the two professions, but also would be a retrograde movement to the advancement of the dentist, which would almost certainly ultimately end in trouble. This question is of more importance than might at first be supposed, and is worthy of the closest consideration. It is impossible for us to have working among us people who are neither of us nor subordinate to us;
people who would be completely out of our hands, with none to check them; people who would be likely to weaken our strength and imperil our unity.

Another scheme suggested that medical men should be recruited for the Royal Army Medical Corps who are possessed of the Diploma in Dentistry. It was proposed to give such officers a small increase of pay that they might perform the dental work of the Army, but such a medical man, did he desire to practice as a dentist, would certainly remain in civil life, where his qualifications are of first-rate market value. Again, the conjoint medical, surgical and dental course of education is of the most expensive variety that can be undertaken. Such an education costs as much or even more than a medical degree taken at Oxford or Cambridge University. The supply of these doubly-qualified recruits, then, is likely to be of an extremely limited nature, and as there are no adequate inducements held out to them, it is to be implied that their presence in the Army is purely a matter of chance, and that a constant supply of them is by no means to be relied upon. Any scheme, then, for the employment of qualified dentists would be unworkable, and, above all, qualified dentists are not really required.

Another scheme suggested the inducement of officers of the Royal Army Medical Corps to undergo a course of training in dentistry, in order to become "Dental Specialists." This scheme would also prove unworkable. No officer could possibly be expected to give up his medical work for the purpose of taking up dentistry among soldiers, when the only proposed advantage to accrue to him by such an undertaking was to consist of an addition of half-a-crown a day to his pay.

Yet another scheme suggested the training and employment of Assistant-Surgeons as dentists. This scheme has been much advocated, and is thought by many officers of experience to be a satisfactory method of meeting the case. The unsatisfactoriness, however, of the scheme as it stands, lies in the fact that the work done by the Assistant-Surgeons could neither be satisfactorily supervised, nor satisfactorily checked. Although Assistant-Surgeons are a hardworking and useful body of men, and although they would undoubtedly be able to learn the work, and satisfactorily perform it, yet if careless work were done its bad results would not be observed till an indefinite time afterwards; and the checking of such work by its inevitably bad results—and there would certainly be no other manner of checking it—would not be a satisfactory method by which to proceed. Reliability must be insisted upon.
It would be very disheartening to run such a scheme for, say, a couple of years, and then to find the results unsatisfactory merely owing to second-rate work being done—unchecked—by the operators.

It is important to note that the amalgam filling—which should be universally used in the Army, being easily worked, and producing absolutely permanent results if introduced over a perfectly clean surface—depends for its success not so much on training and skill as on sheer honesty of purpose and desire for good work on the part of the operator. Such fillings cannot be successful, if during the excavating of the carious cavity the operator becomes overtaken by the lassitude of the East and puts in the filling over an imperfectly cleaned surface. It may be argued, however, that all cavities after being cleaned, should be inspected by an officer of the Royal Army Medical Corps—who, by the way, would certainly be held responsible for the results of all such work—before the filling is inserted. But it should be obvious that such an officer cannot be regarded as a satisfactory judge of such a matter. He has had no training in such work; and as there are so many dental questions involved in such an opinion, or in any such opinions, it follows that his ideas on the subject would be quite valueless; and to go further, it should be clear that he would also be quite at the mercy of his subordinates in this matter—a state of affairs to be regarded with the utmost dissatisfaction.

Therefore unchecked and unsupervised work, while at first wearing a satisfactory appearance, would, sooner or later, lead to the discomfiture of everybody concerned, and to the ultimate certain downfall of the whole scheme. But Assistant-Surgeons would be able to accomplish the requisite work with entire satisfaction, provided that it be done under the trained supervision of Royal Army Medical Corps officers.

The postulate that all future officers of the Royal Army Medical Corps must be in possession of the practical knowledge of dental surgery necessary to the well-being of the Army, forms the fundamental and only sound basis on which local schemes for Army dentistry can be formed. The surgery of the teeth is as much the Army surgeon's work as the surgery of the eyes, or, indeed, any other branch of surgery.

The two chief ends to which dental treatment should be employed are as follows: (a) that every soldier's mouth should be maintained in a hygienic condition, by cleaning, "stopping," or removing bad teeth; (b) that every soldier's "bite" should be preserved to him by the conservation of two or more grinding teeth which "meet." For the practical attainment of these ends
no very extensive knowledge of dentistry is required. All the operations and treatment necessary can be successfully learned during a very short course of training.

The scheme of dental treatment for soldiers in India, which will now be put forward, is based on the assumption that all future Royal Army Medical Corps officers, besides possessing a practical working knowledge of all the ordinary special subjects of the practice of medicine and surgery, should also possess a practical working knowledge of simple dentistry. In civil life it may be thought desirable, from what may be called commercial reasons, to keep the two professions of medicine and dentistry as strictly apart as possible. But in the interests of the Army, and also, it may be said, in the interests of the individual generally, a hard and fast line of demarcation is not desirable.

It is suggested that, on the assumption above indicated, the Royal Army Medical Corps officer would be able, if called upon to do so, to himself perform such dental work as may be required; and also he would be in a position to superintend the work of the Assistant-Surgeons, by whom it is suggested that the actual operating work should ordinarily be accomplished.

For the working of this scheme it is necessary that both the Royal Army Medical Corps officer and the Assistant-Surgeon should receive a course of instruction in simple dentistry at their respective educational centres.

With regard to the instruction to be provided for future Royal Army Medical Corps officers, it is suggested that it should take place at the Royal Army Medical College, in London, during the post-commissioned course. The time necessary for this course need not of necessity be prolonged. Instruction in dental surgery might take place at the expense of some of the courses now in vogue. All the knowledge required could be embodied in a few lectures on dental surgery and anatomy, and in a short, practical course, consisting of the preparation and filling of a dozen or so carious teeth, recruits making suitable patients for such work. The Assistant-Surgeons should also be instructed during the period of their training in a similar but somewhat fuller course.

The practical working of this scheme should take place somewhat as follows: The soldier who comes under notice for dental treatment should be carefully examined with regard to the general state of his teeth by an officer of the Royal Army Medical Corps. Supposing that the soldier is considered to be a proper subject for dental treatment—the inspecting officer should note the exact condition of the teeth in detail on a dental chart, a copy of the one
I am at present using being appended to this article. Then, bearing in mind various dental questions, as well as the chief points to be attained, namely, the hygienic condition of the mouth, and the preservation of the "bite," this officer should proceed to instruct an Assistant-Surgeon as to the work that is to be performed. The Assistant-Surgeon should then take over the case; and carry out the work that has been decided upon. During the course of this work, the satisfactory cleaning of a dental cavity, when accomplished, should be inspected and signed for by an officer. At the conclusion of the work the condition of the teeth should again be inspected and signed for by an officer. The fillings, &c., accomplished should be recorded on the dental chart. This dental chart should be used as a record for statistical purposes. By its use, statistics of a unique and most valuable nature will be obtained.

Objections as to the practical working of such a system are certain to be put forward, but the system here indicated is founded on, and almost exactly resembles, that in use at the Dental School at Guy's Hospital, and after most careful consideration, there can be very little doubt that it would be eminently workable.

I venture to think this system would be popular among Assistant-Surgeons, who would thereby be in a position to increase their emoluments by private practice, and would not be altogether unpopular with officers.

The expense involved by this scheme would be embodied in the following provisions:

The course of instruction in London for Royal Army Medical Corps officers; the course of instruction in Calcutta, Madras, or Bombay for Assistant-Surgeons; the supply of a suitable dental chair, instrument-cabinet and table; a dental engine, and the appertaining accessories, instruments and materials. The whole of this outfit should eventually be found to form a part of the equipment of every Station Hospital. It may here be noted that such dental outfits should never be required to accompany troops in the field, otherwise many abuses and much trouble would be likely to arise. Teeth should be put in as good order as possible in times of peace only.

A recruit who presents himself for enlistment who has no "bite" should be rejected. The idea that such a man should be considered satisfactory if he should provide himself with false teeth, is open to such numberless objections that it is not worth considering.

It may be asked how this scheme of dental treatment would fit in with schemes at present on trial, or schemes which may ultimately
be put into practice in England or elsewhere. It is beyond my present purpose, however, to discuss the question as it concerns any country other than India; but, in conclusion, I wish to express my firm belief that the only universal basis on which satisfactory results can be attained, is to be found in the assumption that every Royal Army Medical Corps officer, as far as possible, must be compulsorily trained in simple dentistry. So shall a true and permanent step forward be the certain result; and so shall all forms of unsatisfactoriness, dependent on the lack of this indispensable knowledge, be relegated to an obilging and easily forgotten past.

DENTAL CHART OF

Surname......................................... Christian Name.................................. Age..........

Date of Enlistment..........................................................

Unit.............................................................. Regt. No.............................. Rank..............

Date of being placed on this Chart..............................

The state of the teeth on being placed on this Chart to be shewn in Red ink, thus—
- Existing cavity.
- Previous filling.

A line to be drawn round any tooth or part of a tooth which is missing.

Subsequent work and conditions to be shewn in Black ink, thus—
- Cavity.
- Filling.
- Tooth or part of a Tooth extracted.
- Crown and root filling.

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