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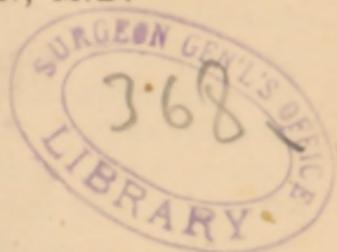
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The Care of the Teeth, from a
Medical Practitioner's
Stand-point

BY

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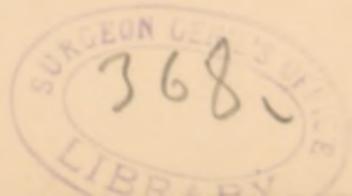
THE CARE OF THE TEETH, FROM A MEDICAL PRACTITIONER'S STAND-POINT.¹

I SHALL confine my remarks to quite a limited consideration of dentition, caries of the teeth, and some of the neuroses resulting therefrom.

Though this subject has an extensive and valuable literature of its own, particularly in respect to the anatomy and pathology of the teeth, yet a wide field remains, in a medical point of view, for further observation and research, especially in respect to the treatment of affections influenced by dental irritation coming under the physician's care.

Were rational methods of research—such as have characterized the exact study of diseases of that group of special sense-organs comprising the ear, nose, and eye, and contributing so greatly to the success of specialism—brought to bear throughout the field of oral surgery, the marked indifference of physicians toward this specialty would soon cease to exist. There is every reason a more general knowledge of the teeth should prevail among medical men, when the well-known sympathy between them and their highly specialized neighbors is considered, since neither one of these organs, including the teeth themselves, can be long affected without disturbing the equilibrium of the nervous distribution about the head. It is well known that these different organs, when diseased,

¹ Read before the Practitioners' Society of New York, May 3, 1889.



have a more or less retroactive influence on each other, the moment one of them is ailing, its morbid influences are propagated to the rest, though not necessarily affecting them all in the same degree. The most superficial knowledge, indeed, of the *modus operandi* of the complex nervous network involved, shows how puzzling under treatment for many of the diseases to which they are subject the behavior of the ear, nose, and eye at times must be, without taking into consideration the influence of diseased teeth. Of course in health these highly organized neighbors maintain an independent and separate existence, so to speak, their intimate sympathetic relationship scarcely manifesting itself perceptibly. Under certain conditions of the system, however, these organs become strikingly susceptible to disturbing influences, and so far as my own experience goes, from no cause more frequently than dental irritation.

There are certain periods in life when dental disturbances are most marked, and at such times the trouble is emphasized in run-down subjects; these periods are the first dentition of infancy, the completion of the second dentition at puberty, and the eruption of the wisdom teeth. During the first three years of childhood, while the first twenty teeth, comprising the first set, are coming, more or less irritation from soreness of the gums is generally experienced, and often the suffering from pain and sympathetic disturbance is very great.¹

Dentition is spoken of as a physiological process, but nature very often dispenses rather torment than pleasure

¹ Persons interested in the study of the anomalies and diseases of the teeth, at all ages, in man, will find a classified collection, taken from cases in the author's aural practice, in the Army Medical Mu-

during the active stages of dental evolution. The clumsy work of the blunt tooth crown, slowly and painfully crowding its way through the tough gum tissue is a severe draft on the infant's store of nervous energy, and in many cases it can but be a source of wonder that they survive the struggle. From the irritability due to loss of sleep, headache, gastric disturbance, etc., many infants are kept in a run-down state all the time, and are, therefore, exceedingly susceptible to head catarrhs, and consequent aural, nasal, and ophthalmic complications, whose management is the more difficult, inasmuch as this causative influence, often the principal one, uninterruptedly continues.

One is surprised at the reluctance so often manifested in acknowledging the vast importance of dentition as a factor in infantile disorders, since instances are by no means infrequent where the trauma, due to the contusion of every tooth coming through the gums, is accompanied by convulsions or an exacerbation of the ear, nose, or eye trouble to which the process may happen to be particularly obnoxious. Fortunately, however, the cruel punishment meted out along with the first instalment of dental fixtures is followed by a period of comparative rest and recuperation from the exhaustive labor of dentition, lasting until about the sixth year.

During the interregnum between first and second dentition, or at any time after they are cut, the first teeth may decay prematurely as a result of malnutrition; or tartar may form on them. If catarrh of the gums now occurs,

seum, Washington. The cases are represented in plaster casts which were made by the Messrs. Stebbins, dentists, of this city. Dr. Billings has had a descriptive catalogue prepared, and the collection is in a convenient place for study.

with suppuration of the socket and periostitis of the alveolar processes, besides the distressing oral irritation ensuing, some of the teeth may be lost.

Second dentition, often beginning at the end of the fifth year, but usually during the sixth year, is delayed a year or two in some feeble children backward in their development, though, before coming through, the site of the two lower six-year molars may long be seen beneath the gum, as indicated by a well-marked prominence.

Children may not suffer pain from the permanent teeth while pushing their way underneath the temporary set, though they frequently become very nervous indeed.



FIG. 1. — "Hutchinson's" teeth.¹

Deciduous teeth now have their nutrition cut off, become gradually loosened by absorption, and are pushed out of the way as so much rubbish. In children having narrow jaws, the teeth, coming in rapidly, are liable to be crowded out of place. In ill-nourished children early decay of the teeth is to be feared. Where such mishaps take place, and fragments of shedding teeth remain attached to the gums, an appalling amount of irritation is set up in the mouth. Second dentition is often a severe ordeal, as may be surmised, and if children are badly fed and clad, and overworked mentally or physically, they are liable to give way under the strain. The exanthemata are illy borne during difficult dentition, and the teeth afterward give evidence of malnutrition, the arrest of development leaving various tracings upon them. The shape and strength of the teeth are often thus modified by constitutional in-

¹ From Syphilitic Diseases of the Eye and Ear. Hutchinson. John Churchill, London, 1863.

fluences during their growth. A number of these defects are known to occur with considerable uniformity, and have received appropriate names indicating their anatomical appearance. The writer has, however, looked in vain for characteristically marked teeth which might be traced to any particular disease, such as have been described by Hutchinson (Fig. 1), for example, as due to syphilis. While children subjected to the cramming process of our public schools have execrably bad teeth, it is alleged that among deaf children and others of slow mental development the contrary holds good.

The cutting of the four second molar teeth takes place about the twelfth year, and concludes the second dentition, excepting the wisdom teeth, which, on account of its importance, I have here regarded as a third process.

Until all of them are entirely through the gums the teeth of children should be kept under observation, since many nervous affections are due to the physiological disturbances they give rise to, and being unattended by pain are liable to be overlooked.

The *dens sapientie*, or third molar teeth, due about the seventeenth year, are often several years behind their time. In the lower jaw they are in erupting prone to take a header, so to speak, and land against the second molar, already firmly implanted in its place. The futile efforts, after a false start, to crowd into line with the other teeth is sometimes attended with agonizing pains, and is not always successful.

This is well shown in Fig. 2¹ (from a specimen in the author's possession). The right wisdom tooth, 1, is wedged

¹ From the *Ear and its Diseases*: Sexton. William Wood & Co. 1888.

in between the ramus or upright portion of the jaw and the second molar tooth; it has not, as yet, been able to leave its socket and cut through the gum. As the tooth is urged onward in the effort to erupt, it is forced against the sensitive root of the neighboring tooth, the pressure giving rise to much irritation. The fully erupted left

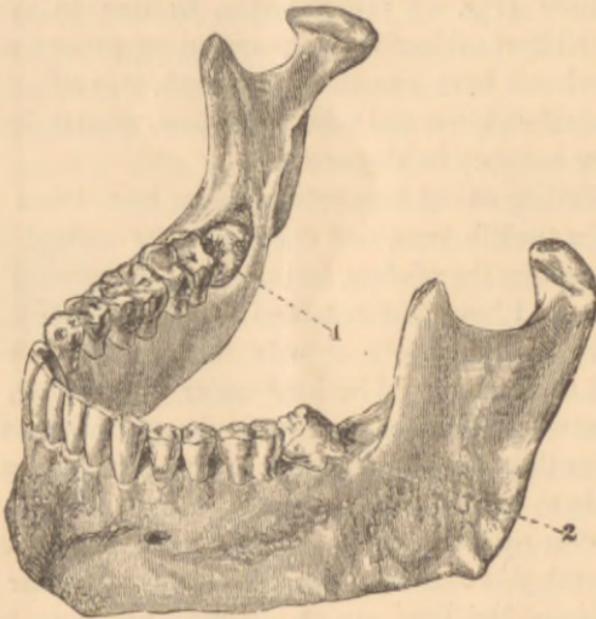


FIG. 2.

wisdom tooth, 2, is inclined toward the first molar; the second molar on this side having been lost, room was afforded this tooth to cut through the gum.

Sometimes the irritation goes on for years, until nature seems to exhaust her expulsive forces without completing the process of eruption; pains may or may not be experienced; sometimes they seem to shoot from the tooth to the ear. Through nervous sympathy the ears are very

often affected. The two upper wisdom teeth usually erupt a short interval after the two lower, and are cut with less difficulty ; they often keep well out of view, presenting themselves to the buccal cavity.

Since these molars seldom occupy their normal place in the jaws they are comparatively useless, and it is generally believed that their extraction is no loss. But whether the pains of eruption are great or absent altogether, the ear, nose, and tonsils often suffer very much from the long-continued irritation through nervous sympathy. Sometimes a flap of the gum remains over the second and third molar teeth for a considerable time after they are cut, indeed until they assume their proper position on a level with the other teeth. This flap of hard tissue remains attached to the gum posteriorly, and is kept in an irritable condition by the mastication of food. The removal of these inconvenient flaps may be accomplished with the knife, shown in Fig. 3. Dr. Frank Abbott has devised a cutting instrument, worked with forceps-like handles, having a strong biting apparatus, into which the flap may be pressed for removal.

Caries of the teeth, owing to their insensibility and density, is a slow and insidious process, unless the teeth are abnormally soft. The patient may not be aware of any disease until either the central pulp or periosteal covering becomes inflamed and sensitive to thermic changes, produced by hot or cold fluids and the like. Susceptible persons, as is known, often experience excruciating pain, since both the



FIG. 3.

pulp and periosteum are well supplied with sensitive nerves. If caries progresses too far before the diseased portion is removed, and the cavity stopped, sooner or later the inflammatory process extends itself from the pulp-chamber downward through the fangs into the cellular tissue underneath, where an abscess is liable to form. The purulent matter may, whether partially encysted or not, escape either through the hollow crown or find an outlet alongside the root. The former, however, is often prevented by the minuteness of the canal of the fang, or by the closing up of the crown cavity with food or by a filling. An abscess at the apical outlet of the fang may remain for a long time, the purulent matter finding an outlet into the mouth in the manner above described, causing foul breath, and sometimes a very disagreeable taste.

Drainage through the gum is probably facilitated when the tooth has been partially denuded by detachment of the periosteum. Some of the products of inflammation are, probably, taken up into the system directly from the abscess by absorption. So long as matter escapes one way or the other, the patient may experience but little pain or other inconvenience. Should the drainage be arrested from any cause, for example, as from taking cold after the crown has been stopped, or filled with impacted food, pain and swelling of the jaw takes place. Everyone is familiar with the comically swollen face so often seen in connection with a "gumboil," as the abscess accompanying the exacerbation is popularly called. It is a misnomer to designate these teeth as absolutely "dead" so long as any nutrition is derived from the periosteum of the alveolus, though the perhaps equally important source of vitality, namely, the pulp, may be wholly wanting. The

ultimate career of carious teeth, where the pulp is absent, depends largely upon the state of the periosteal envelope; this, being very tenacious of vitality, may aid in retaining the tooth a long time. In many instances, however, the painfulness of exacerbations, after a tooth has been stopped, is unendurable, and the offender is extracted. In some vigorous persons a "dead" tooth may remain in the jaws, even after being filled, without perceptible irritation for a long time. But in most persons, especially those who have become run down, there is more or less nervous irritation, often without any perceptible disturbance in the tooth itself, which, together with the effects produced by a deep abscess in the gums, very decidedly affects the health in one way or another. Moreover, as the death of the tooth becomes more complete its position in the jaw is similar to the sequestræ of bone—it is more or less of a foreign body. On the removal of pulpless teeth, which have been filled for some time, a surprising quantity of fetid matter and highly offensive gas often escapes from the pus cavity.

Destructive inflammation sometimes is set up in the pulp of a tooth by the concussion of a fall or a blow, the tooth afterward becoming more or less dark in color, as in instances where the loss of the pulp occurs in consequence of caries.

Carious teeth are not only often sensitive to thermic changes, as has been stated, but they may be tender to the impact of mastication or other force applied to them. When metal fillings are not well borne in the cavities of sensitive teeth, because of their readiness to transmit impressions of hot and cold, the pulp often becomes so painful that dentists destroy it entirely, afterward filling the pulp

chamber and canals of the fangs with substances more or less indestructible. In this procedure the cavity of the tooth is made as free of carious tissues as possible before it is filled.

These teeth are tolerated in the jaws, after they have been stopped up, for a longer or shorter time. They are usually sensitive in some degree, as morbid action scarcely ever ceases entirely. Suppuration occurs in a very considerable number of instances, and pain is experienced in consequence of the pressure of retained secretions. Relief usually follows removal of the filling; if this is delayed a gumboil is established with an outlet on either the buccal or palatal surface of the gum, but most frequently in the former situation. The minute opening of these sinuses, to the inexperienced, is often difficult to find, and hence the existence of a suppurating cavity, consequent on a gumboil, is not always suspected, but may exist for years without discovery unless the outlet becomes obstructed. The roots of the teeth underneath the antrum of Highmore impinge closely upon this cavity of the upper jaw, and alveolar abscesses sometimes find an outlet into it; the purulent matter finally escaping through the nose.

The question of retaining these so-called dead teeth in the jaws is one to which I have been obliged to give much attention, since a very considerable number of persons coming to me with aural affections have nervous troubles associated therewith which cannot be successfully treated until the affected teeth are removed. I have found that the irritation propagated from diseased teeth, especially those filled after destruction of the pulp, has very often delayed or even prevented recovery. After the removal of such teeth recovery is often very rapid. Much has

been said about the harmlessness of keeping diseased teeth in the jaws, but we must remember that the practice is never a safe one, since it ignores the very first principle of surgery, namely, the maintenance of drainage. Moreover, it is not possible to thoroughly clean out the canal cavity of most carious teeth, and even if this were accomplished, it would not prevent further necrotic action going on in the pulp-chamber, canal of the roots, or at the apical outlet under favoring circumstances, since the main source of nutrition is cut off from these parts. The filling material is sometimes pushed through the canal of the root into the tissues beyond. A case of this kind once came to me where the gold used in filling had thus kept up an irritation for more than ten years, which, though not appreciable locally, caused neuralgic pains in the head. Entire relief followed removal of the tooth which I now exhibit (see Fig. 4), that the members of the Society may examine for themselves. It would seem that such accidents as the above could not always be avoided, since the dentist must carry on his work in a region beyond the range of vision, and in structures whose size and condition are subject to great variation.



FIG. 4.

Though strong and healthy persons may tolerate the presence of these teeth under exceptionally favorable circumstances, it is generally a safe rule to always remove them from the jaws of delicate persons.

In this connection it is well to point out the possible, nay often probable, danger to health from all fixtures now so commonly worn in the mouth, requiring for their retention the remains of defective teeth, as caps, crowns, bridges, and other metal attachments. Pivot teeth and

transplanted or replanted teeth¹ are likewise more or less detrimental, as are also ill-fitting and vulcanite plates.

Tartar cannot be regarded as a disease of the teeth, since its accumulation at any age is due, for the most part, to an excess of alkaline salts in the saliva. Its presence may afford a valuable indication in the treatment of subjects of a gouty diathesis.

In facial palsy, torticollis, chorea, and the like, the influence of diseased teeth and dentition should never be overlooked.

In the treatment of alveolar abscess by removal of the teeth, time should not be lost in waiting for swelling to subside before extraction; nor should pieces of roots or the alveolar process be left to work out themselves.

We all of us, I presume, are reluctant to criticise the well-meant endeavors of others, and in considering the ill-advised and injurious dental work done, sight should not be lost of the commendable advances made in dentistry during the past fifty years. And whatever may be said in respect to the meddlesome treatment of the teeth, especially carious teeth, now so much in vogue, it is largely due to the indifference of the profession toward oral surgery. It is true that medical men have taken up the study of the teeth from time to time, and have by their labors very much advanced dental anatomy and pathology; but it is

¹ It has been claimed that teeth may be safely put back in the socket, or even transplanted from a foreign source, and form a healthy union with the jaw. But this so far as known to the writer, at least, has not been satisfactorily demonstrated. Such teeth, it would seem, remain rather as artificial fixtures, becoming tolerated, so to speak, very much as ill-fitting plates do, without causing pain or discomfort even.

not to the acquisition of medical knowledge that dentistry is indebted for the development of clever handiwork, but to the special smithcraft of recruits coming from the ranks of metal workers and other skilled mechanic arts.

So long as dentists are wanting in surgical knowledge, unattainable without due course of study, and surgeons taking up this profession are unable to acquire the practical mechanical skill requisite in dentistry, the status of dentists must needs remain undecided, for its recruits come from these extremes.

It would seem that the sooner a greater knowledge of oral surgery than generally prevails is made a requisite for graduation by medical schools, the better it will be for all concerned. But this cannot be accomplished by the establishment of dental colleges alone, for oral surgery differs from no other specialty in respect to requiring a regular medical training. Unfortunately, however, for the inauguration of any measures of reform in this direction, the apathy so long existing in the profession as regards the subject has practically excluded this branch of surgery from the domain of medicine, greatly to the disadvantage of those who are called upon to treat neuroses arising from diseases of the teeth. If medical colleges undertake to educate dentists it would be well to bear in mind the necessity for thoroughly equipped laboratories in which metal working may be taught.

DISCUSSION.

DR. A. H. SMITH thought the instruments shown by the speaker might be very useful in removing the little flaps of gum, a manoeuvre which he had sometimes been rather embarrassed in executing with the instruments at his command.

DR. BEVERLEY ROBINSON said that earache, or even a discharge from the nose, was not infrequently due to some trouble with the teeth, but it was more common to find neuroses in the pharyngeal region from this cause. He believed that amalgam fillings were especially injurious, and it was his custom in cases of this kind, when the ordinary remedies failed, to send his patient to the dentist in order to have any amalgam fillings that might be present removed. He saw a patient recently who had been under his care some time ago. This man had suffered greatly from pain in the pharynx, especially at night, and no relief had been obtained by any of the remedies employed, such as sprays and local applications, or even from anodynes given in doses as large as was consistent with safety. There was no local trouble apparent. Finally, some amalgam fillings in his teeth were removed, and then his troubles ceased.

Some time ago he had attended a lady suffering from a very severe attack of mumps. After the disease had subsided there was considerable swelling left around the angle of the jaw. A needle introduced into the swelling gave no evidences of the presence of pus. As the swelling persisted, massage was finally employed, and this was followed by a discharge of pus into the mouth. On the second day after the massage was begun the lady com-

plained of a feeling of "goneness" and weakness, and as this seemed to be connected with the massage the latter was stopped. The speaker asked whether massage ought to be used in cases like this, in which there was a suppurating process around a tooth, when medicinal means were of no avail, and surgical measures, for one reason or another, could not be employed. In this case the massage treatment certainly had a beneficial effect as far as the pain was concerned, but was it harmful in causing the absorption of the pus?

DR. C. L. DANA said that he had never seen any nervous disturbances which could be attributed directly to the process of second dentition. Nearly all the neuroses of childhood, such as headache and the like, develop a little later than the period of dentition. He could not now recall many cases of reflex troubles from bad teeth. He had seen a few cases of brow neuralgia, accompanied by a dilated pupil and slight suffusion of the eye, which were apparently due to this cause. There was an old medical superstition which ought to be done away with, and that was that *tic-douloureux* was caused by bad teeth. He had had patients with this trouble who came to him with nearly all their teeth pulled out, yet their pains continued as severe as before.

In hereditary ataxia there is sometimes seen a condition of the teeth resembling very closely that described by Hutchinson as characteristic of hereditary syphilis.

DR. JOSEPH D. BRYANT said that he saw no need of a special instrument for the removal of the gum flaps referred to by the reader of the paper. He had always found that scissors curved on the flat answered the purpose very well.

DR. CLEMENT CLEVELAND referred to a case of severe supraorbital neuralgia coming on every afternoon, in which the pain was so intense that the sufferer was compelled to go to bed. Many remedies were tried without avail, and finally a dentist was consulted. He first removed the filling from one of the wisdom teeth, and then, no relief following, extracted the tooth. There was found to be commencing degeneration of the nerve, but the loss of the tooth caused no diminution of the pain. A cure was finally effected by means of quinine.

DR. V. P. GIBNEY said that he had found peg-teeth very commonly in hospital children suffering from joint lesions. Formerly these teeth were called scrofulous or strumous, but now they would probably be called tuberculous teeth. He had seen very few cases in which the teeth were like those described by Hutchinson as the teeth of hereditary syphilis.

DR. SEXTON, referring to the case mentioned by Dr. Robinson, said that one of two things would have probably been found to exist : either the tooth had supplicated at the root, in which case pressure from pus or gases might have caused the trouble ; or if the tooth possessed its pulp, it might be that the amalgam filling was so near that it would transmit the heat or cold. He did not mean to convey the idea that deafness was caused directly by the presence of diseased teeth, but desired simply to refer to the conditions in which deafness might be produced by reflex causes. He referred to a case which he had seen some time ago, of a patient who had pains in the ear, chest, and various other places. He could find no trouble in the ear, and Dr. Robinson, to whom he referred the patient, could find nothing wrong in the chest. Examination of the

mouth showed the presence of a carious tooth ; this was extracted, but no relief followed. On more careful examination, however, an old root was found in the jaw, and when this was removed the patient recovered entirely. In the case of so-called dead teeth, as long as they remain unfilled the pus and gas will escape, but when such a tooth is filled there is no chance for the escape of the pus and gas unless the filling be removed or nature affords an outlet through the gum. Filling a dead tooth is, therefore, bad surgical practice. He did not agree with Dr. Dana, that tic-douloureux is never caused by the presence of bad teeth in the mouth. It might well be that no relief would follow the removal of the offending teeth, but this would not prove that they were not originally the cause of the trouble.

[EDITORIAL NOTICE.]

THE TEETH AND THE GENERAL PRACTITIONER.

AFFECTIONS of the teeth are not so often considered in our columns but that the general practitioner may congratulate himself on the appearance, in this issue, of an instructive, though cursory, paper and discussion on this subject before a recent meeting of the Practitioners' Society of New York. There is doubtless a strongly rooted reluctance on the part of the profession (and this was brought out in the discussion to some extent) to agree with the writer in respect to the importance he attaches to the dental reflex. But the candid observer can but feel that much careless dental work may be the outcome of referring dental neuroses due to caries of the teeth for treatment to persons unfamiliar, as most dentists are, with the important relations of the teeth with other

organs. And where the physician is unable himself to offer any suggestions to the dentist in this regard, the patient is liable to be made worse rather than better, especially from the practice of saving so-called dead teeth. We trust the interest excited by thus bringing this subject before the profession may continue until the surgical importance of diseases of the teeth is recognized by medical men. Every surgeon now fully recognizes the importance of drainage and antisepsis in the treatment of necrotic processes, especially of the osseous tissues ; and unless better means than now generally prevail—since the above well-known surgical principles are ignored in treating “dead” teeth so as to retain them in the jaws—are adopted, more or less danger is imminent in every case where the attempt is made.

