

present without the cells themselves being involved, in which case an incision is made down to the bone, over the site of the swelling. Should the cells show involvement, a flap of skin is turned back and an opening made into them with a small trephine designed for the purpose, or with a sharp gouge, generally the latter instrument. After they have been well exposed the cavity is washed out with a 1 to 2,000 solution of bichlorid of mercury, or the following:

R. Hydrarg. biniodid.	gr. $\frac{1}{4}$.	015
Sodii iodid.	gr. $\frac{1}{4}$.	015
Aquæ	$\frac{3}{4}$ i.	30

Misce.

Care is always exercised that the solution pass into the cavity and out of the external meatus. Drainage tubes are inserted, and the ear kept carefully syringed. The tubes remain until the discharge ceases. The further complications that may attend chronic suppuration are thrombosis of the lateral sinus, cerebral abscess and meningitis. Cerebral abscess is opened and the pus let out, and the others are treated on general principles. Constitutional treatment and general hygiene are carefully looked after.

Chronic Non-suppurative.—Realizing that non-suppurative catarrh in the large majority of cases is the result of pathologic changes in the post-nasal chamber, and that a catarrh originating here, through extension into the Eustachian tube may produce a stenosis of its caliber through chronic inflammatory thickening of the mucous membrane, special attention is directed to the treatment of post-nasal catarrh and concomitant or producing conditions. Inflation is practiced regularly, in order to keep the tube patent and prevent fixation of the ossicles, and also for the purpose of supplying the normal quantity of air to the tympanum. When only one ear is affected or there are any special reasons why both tympana should not be inflated, the catheter is used. While the inflations are in progress the membrane is carefully watched for evidences of relaxation, in which case they are not done so often. In order to stimulate the lining membrane of the tube to a healthier condition vapors are employed, a favorite being:

R. Chloroformi.	āā 5 ij.	8
Etheri acet.	ad $\frac{3}{4}$ i.	30
Sp. vini rect.		

Misce.

A few drops of this solution are blown into the middle ear through a Dundas Grant¹ self-inflator, or from an ordinary Politzer bag with an expanded nozzle. The inflator is a simple and inexpensive instrument, and is supplied from the dispensary to patients. It consists of a glass tube about two inches long, contracted at both ends. The expanded center contains cotton, and one end serves as a mouthpiece, while to the other is attached a piece of rubber tubing about fifteen inches long. A smaller piece of glass tubing is connected with the other end of the rubber, and over this fits a rubber nose-piece. After a few drops of the ethereal mixture is dropped on the cotton the patient fits the nose-piece in one nostril, closing the other with his fingers, and blows steadily with puffed-out cheeks, until he feels the membranous movement. The *minimum* force necessary to produce this result is advised. The vapor can be specially directed to one ear by stopping the other, and turning the one to be inflated upward. Chloroform greatly facilitates the passage of air through the tube. Dr. Grant claims brilliant results from this method of inflation and medication,

¹ One of the surgeons.

where Politzerization produced no appreciable benefit, and he attributes the good results to the *minimum* pressure employed. In long continued inflation the advantage of the Grant method is obvious. The Eustachian bougie is seldom used in this hospital. Massage is advocated in desirable cases, the instrument being Siegle's pneumatic speculum or some modification of it.

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COMMON GROUND OF MEDICINE AND DENTISTRY.

Read in the Section on Dental and Oral Surgery, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY JOSEPH ROACH, M.D.

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At the outstart, definitions are necessary, and it is well to state, that the term medicine includes all that the average practitioner would expect to do, who did not think of establishing himself in any one of the numberless so-called specialties of medicine. For convenience, I will call dentistry one of these specialties, although it might be shown, that it is so distinct and so peculiar as to make it well nigh a thing by itself and difficult to place with any of the specialties. If it be surgery, many operations consist in cutting out decayed parts in an organ so constituted that it has of itself no power to make use of the *vis medicatrix naturæ*, found in other organs and tissues, and with filling the same with some foreign material. The sole use of that material is to prevent further progress of the disease and to serve as a substitute for grinding and cutting food.

There is no blood, no ligation of arteries, no stitches, no sutures are made; and the patient is dismissed, on the spot, cured by a surgery, of which it might be said, that its only relapses are due either to mechanical imperfections in the operations or to inherent faults in the structure repaired. True it is, that one department of this work trenches on surgery thus far; that in the exploration of the canals, occupying the roots of teeth, either by a failure to remove living tissue or a failure to disinfect any decomposed tissue, a local sepsis may occur, resulting in abscess and occasionally invoking grave consequences. But even this does not ordinarily rise higher in the scale of surgery, than the treatment of a felon on the finger. I have thus purposely taken a low view of the daily work of dentistry for this reason. I think possibly too much pains have been taken by its membership to elevate a most useful, nay, a most indispensable calling, into a position to vie with surgery proper. I say daily work, for while it is true, that, as dentists, we are occasionally called upon to repair a fractured maxilla or even extirpate a tumor of the jaw; such operations are but occasional and in the nature of the case, it seems to me to fall as naturally into the domain of the general surgeon, as does the fracture of the femur. The true usefulness of the dental surgeon in such cases rests in his ability as mechanic to skillfully form and adjust special splints in case of fracture. This ability he forms from his daily work noticing artificial dentures or in his possessing special, cutting instruments in the form of burs, etc., for the dental engine, instruments, peculiarly adapted for his own work in removing decay from teeth and turned to occasional use as above in removing tumors. Still none the less skill-

ful, is the work of making plates, crowns, bridges, etc., where to the dexterity of the mechanic must be added the fine eye of the artist, restoring sunken features, harmonizing incongruities and above all and most perplexing of all, pleasing or failing to please the tastes of fading humanity.

But while all the above may be true, and the work of the average dental surgeon may be largely mechanical, the fact, that both the surgeon and he work on the human body, makes a bond of union between them, which is worth study, inasmuch as whatever links in this bond are found to be the common property of both, are of much greater interest than any dissimilar points.

Of the maladies of common interest I will mention those often obscure and occasionally grave diseases, that involve the maxillary sinus. This is obvious for the reason, that in such cases the dental surgeon very often is apt to be the first observer on the ground. For whether we view these diseases as arising from diseased teeth or from some more remote and obscure cause, the dental surgeon, if he be ready to take up such cases for himself or turn them over to the surgeon, is none the less called on to diagnose accurately the symptoms, that they may be treated as purely from tooth-trouble or he may proceed on some other line. It is not in the province of this paper fully to describe all the various troubles, that may arise in the maxillary sinus; but, if you will throw with me a rapid glance at its position and uses, it will be of service in following any line of treatment that may be suggested. It is situated above the so-called jaw teeth on either side of the upper jaw and extending from the first bicuspid (sometimes the cuspid) backward to the second molar of the same. Its size varies and its exterior or facial walls are quite thin, the palatal wall stronger and its floor very variable in shape and thickness. The only opening into it upward is into the nasal cavity. The situation of the cavity is surgically important, for when we consider the tendency of all mucous-membrane covered surfaces to catarrhal troubles and the position of any cavity without natural drain, shut in by bony walls, and its only outlet narrow and pointing upward, we see at a glance how the difficulty or impossibility of any natural drainage and the tendency of fluids once accumulated could give even more trouble than does occur. Indeed if we consider the tendency of catarrhal troubles to spread by continuity of surface, it seems a wonder that all cases of chronic nasal catarrh do not involve engorgement of the antrum itself. Certainly this is what one might expect. Yet it would seem that this is not only not true; but that, on the other hand, certainly from the partial view of the case taken by the dental surgeon, the lighting up of antral trouble can be traced often to diseases of the teeth, the roots of which lie under its floor.

The dissecting table reveals to the dental pathologist a curious state of affairs just here; but, in order to grasp this situation fully, it is necessary to state what comes much more closely under the observation of the dental surgeon, a fact that only the physiognomist studies, as it should be, and that is, that in inheriting our tendencies, we inherit a mixture. Small jaws with large teeth are the rule, occasionally large jaws with small teeth: the back teeth of the father, the front teeth of the mother or vice versa. The jaws are sometimes so narrow and cramped and the teeth so large, that they crowd each other and such a lack of

blood in the jaw, from non-use in mastication, makes bone and muscle without stamina. The result is, that the large teeth of the upper maxilla, the roots being formed physiologically, by addition to their length are either forced through the floor of the antrum, or else, in the evolution of that chamber from six years to twenty-one, the periosteum fails to build thickly enough to cover those roots.

They are, however, always covered by the membranous lining of this cavity, else the vessels, passing into the foramina of these teeth, would be exposed to the atmosphere. All this is not likely to involve the antrum in pathologic trouble so long as the roots of these teeth are sound, but it may be fairly stated, that more than one-half of the patients, falling into the dentist's hands, sooner or later have pulpless molars, the roots of which project through the floor of the maxillary sinus and are objects more or less irritating to the tissues against which they rest. Again in the case of molars, the roots of which do not pass through the antral floor, in the case of devitalization, an ordinary alveolar abscess may occur with the sequelæ of absorption of the alveolar plate at the tip of the root and the outflowing of pus into the antrum itself. It is true, that an abscess in such situation might not be of grave consequences, yet it is plainly a situation of risk. This may not often exist, for the reason that the widely forked roots of the upper molars and their nearness to the outer walls of bone cause development of fistulous openings, away from the antrum, yet it is a source of danger and as such should be studied. Dentists devitalize and remove the pulp from the roots of such teeth. This is a very usual, almost daily, operation. But while an earnest and faithful effort is made to perform this operation thoroughly, so attenuated are the canals of the molars, that it is not at all certain that all the pulp is removed. In such a case it is easy to see that any filling material forced into the root canal may force particles of dead tissue through the foramen and into the tissues above, inoculating these with septic matter; or if disinfectants have been used there, such as carbolic acid, corrosive sublimate, etc., may be forced through to the injury of a tissue which has, as described in the outset, no drainage in case of chronic irritation. I have said enough on this subject, I dare say, to call your attention to certain lesions of the antrum, that are common ground of observation and treatment of both dentist and surgeon, and call attention in conclusion to a case, sometimes very grave, always painful, that of an impacted and abscessed third lower molar.

The same causes to which I have already alluded, as dwarfing the upper jaw, conjoin to make the lower both small and short. In the evolution of the lower wisdom tooth, it seems less often to share in the dwarfing process than the corresponding upper tooth. In a word, it is often too large for the space between the second molar and the angle of the jaw. In consequence its eruption is so interfered with, that it may be either only partially erupted or it may be impacted at an angle against the second molar, appearing through the gum slightly or not at all. Abscess of this tooth often involves not only the tissues immediately around it, but the tissues of the throat become inflamed and grave results ensue. It is pretty well established that throat trouble of a serious, or even fatal character, has been set up by an agency seemingly so unimportant. Abscess, opening into the

pharynx, is certainly one of the sequelæ of this trouble. I have been told of cases, where the infiltration of pus between the muscles of the neck and connective tissue proceeded to the formation of fistulous openings on the stomach with ordinary results of blood poisoning.

I have said enough to indicate a common ground for dentistry and surgery in the two cases above cited. Many more might be mentioned, if time permitted, to strengthen the statement thereof.

THE DESTRUCTION OF CHILDREN'S TEETH—CAUSE AND PREVENTION.

Read by title in the Section on Dental and Oral Surgery at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY J. G. HENISTER, M.D.

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The destruction of children's teeth is to me, as it must be to all of you, a source of the greatest regret, and ordinary methods have failed to overcome the difficulty. It would be useless for me to attempt to go into details as to the cause of this condition, as it must be perfectly apparent to all, who stop to consider a moment. I think the first and greatest cause is neglect and ignorance as to the proper time and means of caring for the teeth. I tell you, gentlemen, it is astonishing to see the ignorance of some parents in regard to the teeth of their children. They will come into your office with a child and point to a six-year molar with the crown nearly destroyed, and say: "Doctor I wish you would extract this little snag." You will answer, "That is a permanent tooth and should be preserved." They reply, "Oh no that is only one of the baby teeth." You insist that it is a permanent tooth and refuse to extract it, and they leave your office a look of great incredulity, go to some one else who will extract it, and you will probably never see them again. This ignorance is not confined to a few of the poor, who are unable to procure the services of a dentist but extends to others who have plenty of time and means, but who never think of their children's teeth until they are crying with the pains of toothache. There is still another class of parents, who do all that they think necessary by insisting upon the use of the tooth-brush and dentifrices, but never think of consulting a dentist, so long as the child does not complain. They make a mistake, common to a great many, that the incisors are the first permanent teeth, and thus utterly neglect the six-year molar, thereby leaving it for a year or two exposed to the inroads of caries, without any protection whatever.

Another important cause of this decay is in the use of improper foods; by double bolting in the craze for white flour and bread, the phosphates or bone-making properties are taken away, and as a consequence, the teeth of children are imperfectly developed. I suggest to my patients the use of corn bread and graham bread, and I also prescribe the "Syrup of Hypophosphites" to endeavor to check and restore the loss of the lime salts of the teeth.

I have tried to enumerate a few of the causes of the loss of the teeth of children; I now come to the methods of saving them and to the responsibility of dentists and physicians alike. I have spoken to physicians about the matter, and they nearly all disclaim any responsibility, saying: "The teeth are not in our

line, that is your work." This is a serious mistake. No physician who has the welfare of his patients at heart can afford to neglect the teeth, for in the mouth begins the process of digestion, and if the food is not properly masticated, it goes into the stomach in lumps, and gives the digestive organs there, so much work that they become impaired and unable to properly perform their functions. We have been called a "nation of dyspeptics" and the cause has been attributed to the rush and hurry of American life, in eating too much and too rapidly, but I do not think this is the entire cause. The teeth being imperfect, imperfect mastication is the result, which is an important factor in this distressing complaint. The physician says, "What can I do? You would not have me fill the teeth?" No, that is entirely unnecessary and out of his line, but he can, at least, examine the teeth of children, and insist upon the parents taking them to some careful dentist. This is not a mere suggestion; it is his duty, a sacred obligation. If the nose, eye or ear is affected, does he not examine it and insist upon the parent taking the child to a specialist? Do you not think that the teeth are of sufficient importance to warrant equal care? I think so and say that the health of future generations will, in a great measure, depend upon the preservation of the teeth now. It has been predicted that the "coming man" will be toothless and hairless, and if things continue as they have been going, this will probably be so. It has been demonstrated by scientists that deformities and malformations can be transmitted from parent to offspring. If it is so with other parts of the body, why not with teeth? Jaws are sometimes entirely stripped of teeth, and when some teeth do remain they are only vestiges of what they should be. This I think is a deformity that can be transmitted.

I have observed on several occasions that peculiarities of the mouths of parents were inherited by children; for instance, I saw a mother who never had a left superior lateral incisor. One of her sons, in fact, the only one of her children I ever saw, had the same peculiarity. So I might go on giving examples of what will probably happen if we do not save the teeth of the children. You all know that the field of action of the dentist is, in a manner, circumscribed. He can not regularly go the homes of his patients to examine their teeth, but must wait until they come to him. Now here is where the physician should do his part. He usually has the care of the child from its very infancy, and if he would occasionally make a careful examination of the teeth of his little patients, and send them to the dentist, the small cavities of decay could be filled with some simple material, and the teeth thus preserved indefinitely. A short time ago a physician, whom I know, insisted that a mother should take her little girl to a dentist, saying the six-year molars were decayed, and required filling. She was brought to me and I found that the teeth were badly decayed, and so sensitive that I had great difficulty in persuading the child to allow me to do anything to them. She was eleven years of age; if this physician had examined her mouth regularly, and insisted upon her going to a dentist the caries could not have made such progress. Dr. Bonwill, the eminent Philadelphia dentist, has said that the only way he has ever been able to do anything with the six-year molar, was to fill every tiny spot of decay. So once again I beg of physicians to watch the mouths of the children, and send them to a dentist.