

In case of inflammatory swelling set up by the discharge of pus from that cavity, the enlargement of the middle turbinal might easily occlude the orifice. We should therefore be prepared to remove, by means of a snare, the posterior part of that body when it produced such an effect. In a case of sphenoidal suppuration, producing intense headache and mental disturbance, this operation gave the greatest relief. To show how necessary it is to diagnose and treat sphenoidal suppuration, he would add to what Mr. Cross and Dr. Knapp had said by citing a case recently reported by Dr. Sandford, of Cork, in which he had had the opportunity of making a *post-mortem* examination of a lunatic who had become blind some time before death. There was enormous distension of the sphenoidal sinus, compressing both optic nerves, and extensive extra-dural suppuration.

Ethmoidal sinusitis was very troublesome, and was apt to give rise to one of the forms of atrophic rhinitis as a sequel to the suppuration. He believed that a number of cases of atrophic rhinitis arose from sinus disease, others from syphilis, and others without any discernible cause. In the case of a gentleman sent to him by Dr. Cartaz, of Paris, this stage had been reached, and the most distressing mental depression with asthenopia and dread of light accompanied it. He got considerable relief from irrigation of the ethmoidal cells, by means of suitable canula through the nose, the orifices being enlarged artificially as well as by the disease, and particularly from the use of the post-nasal douche. Chiari is reported to say that the ethmoidal cells are best opened by means of a perforation made in the bulla ethmoidalis. The anterior portion of the middle turbinated body may be previously removed.

An interesting case of ethmoidal disease occurred in the person of a medical friend. It caused proptosis, and several eminent surgeons diagnosed the case as one of sarcoma requiring operation, but offering little hope. The operation was commenced, and during the necessary dissection the swelling was punctured, and pus escaped. He is now perfectly well, and has no discomfort as long as he keeps the external orifice of the sinus from healing up by means of a small celluloid plug.

ELEVENTH INTERNATIONAL MEDICAL CONGRESS IN ROME.

ON THE OPERATION FOR ADENOID VEGETATIONS.

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THE material from which I make this review extends itself over 233 cases in my private practice, and 152 in my hospital practice. The former were observed between the years 1885 and the middle of 1893, and were all taken from among 5173 cases of disease of the throat and nose, corresponding, therefore, to a percentage of $4\frac{1}{3}$. The latter 152 cases were seen between 1889 and the middle of 1893, and they were derived

from about 4000 throat and nose cases, corresponding to a percentage of 3·8. It is, therefore, a somewhat remarkable fact that in the class frequenting the hospital the disease was less frequently observed than among the better-off private patients. I explain this by the circumstance that the poorer class pay less attention to whether a child sleeps with open mouth or shows other signs of disturbed nasal respiration. Among the poor and less well-nourished classes scrofula (which, according to many authors, and especially Schaffer, of Bremen, is one of the most frequent causes of adenoid vegetations) is much more frequently present than among the well-to-do middle classes living in good circumstances, whereas also infectious diseases, such as scarlet fever, measles, diphtheria, etc., occur more frequently and with greater severity among them. All these diseases, it is to be remembered, favour the growth of vegetations.

As regards the classification according to age and sex, there were different data under the two headings, which I will here shortly set forth, although they do not properly belong to the question under consideration. Out of the 233 private patients, 121 were of the male sex, 112 of the female, while among the hospital patients to 58 males there were 94 females; therefore, there were relatively far more females than in private practice, where both sexes were nearly equally balanced. As an explanation, we may observe that the poorer people frequenting the hospitals notice the girls more than the boys, as the latter leave the parents' house comparatively very early in order to follow their various occupations: and furthermore, the peculiar appearance of the face produced by nasal obstruction would strike the parents more in the case of girls than in that of boys.

As regards age, we find among the 385 cases that 379 were sufficiently accurately noted to show that there were 130 under ten years old, 196 between ten and twenty, and 37 over twenty; 16 were more than thirty years old, and the four oldest were aged respectively forty-two, forty-six, fifty-one, and fifty-nine. These reports show, in agreement with other statistics, that by far the largest number of cases of adenoid vegetations come under observation before the twentieth year of life. It is, however, remarkable that we have a comparatively large number, namely 16, of persons over thirty years of age, whereas Schaffer, in his statistics of over 1000 cases, found only 6. Of my 16 cases, 14 had only small growths, which, as seen by posterior rhinoscopy, only reached to the superior turbinated bone. Frequently these were very hard, and gave rise to a considerable amount of bleeding at the operation; once they extended to the middle of the choanae, and once concealed the choanae completely. This last case was one of a woman, forty-six years old, who suffered from bronchial asthma. I had the satisfaction, after extirpating the growths completely in two sittings by means of the snare, to see the asthma disappear entirely. Once there came to me a man of fifty-one years of age, with a son aged fifteen, both showing vegetations of medium size, which I removed in both instances.

Shrivelling up of vegetations appears, therefore, not to take place with equal rapidity in all cases, and indeed in many not to occur at all; still, in any case, there is a modification of the symptoms when the vegetations in

adults cease to grow, as the choanae increase in size from childhood to mature age, and hence are not so much obstructed by the growths, which cease to enlarge. On an average the adenoid vegetations were in adults generally smaller and harder than in children, which would agree with the general view regarding their involution. The youngest patient was two years of age.

As regards the etiology, I have frequently found slight evidences of scrofula in children, and from many elicited the information that they had undergone attacks of scarlet fever, measles, and whooping-cough. At the same time I must state that frequently quite healthy, strong children were troubled with adenoid vegetations. Frequently the affection showed itself in several of the same family, once (as already mentioned) in a father and son, once in a mother and three children, so that in such cases we had to admit that there was a congenital predisposition. Various complications which occurred throw light upon the etiology. Thus I found in the 233 private cases, which are sufficiently described, that 39 times the faucial tonsils were chronically enlarged, in 39 there was atrophic rhinitis with extensive formation of crusts, and in 24 abnormally wide nasal passages without any anomaly of secretion. Therefore, in 63 there was a diminished development of the turbinals, which, according to the views of Hoffman, is to be looked upon as a sign of a constitutional anomaly. Finally, I was able, as I pointed out so far back as 1887, to see the vegetations in very many cases by means of anterior rhinoscopy if I directed the patient to utter the sound "ee" (German "i"), which caused the velum to rise. The vegetations were generally raised at the same time and more easily seen. That, of course, was only possible when the interval between the turbinals and the septum was fairly marked, which generally depended upon the diminished development of the turbinal bodies without necessarily there being anything that one could call atrophy. Of course, no cocaine was put into the nose during this investigation, and it was only used when there was evidence of hypertrophy of the mucous membrane, as was the case 67 times. The diagnosis could in many cases be made by the results of the obstructed nasal respiration—namely, the open mouth, the peculiar physiognomy, the altered speech, etc., with a considerable amount of probability, but it was almost always confirmed by rhinoscopy generally, both anterior and posterior. The former made the diagnosis possible, as already pointed out, in very many cases, but as a rule posterior rhinoscopy was generally employed as well, and very frequently without any necessity for the application of cocaine in the pharynx. A mirror of only thirteen millimetres in diameter was necessary, which could be passed into, even through, a very narrow space. In exceptional sensibility I painted the pharynx, the velum, and the base of the tongue with a twenty per cent. solution of cocaine, made the patient sit on a high chair, or else stand up and bend the head slightly forward; I could then easily, even in small children, inspect the naso-pharynx. I have very seldom used a palate-hook, and then only in exceptionally unfavourable cases. In this way I was able to carry out posterior rhinoscopy 206 times in the 233 private cases—naturally, only seldom in quite small children, but still several times, even if a good deal of trouble

was required. In these cases I carried out digital examination, partly to judge of the degree of hardness of the growth, and partly as a substitute for unsuccessful inspection. It was interesting to compare the results of anterior and posterior rhinoscopy, which were almost in all cases carried out on the same individual.

Anterior rhinoscopy allowed in the somewhat wider noses the lower border of the vegetations to be distinctly seen, and indeed in a more natural way in the correct height, because by this process one looked thoroughly into the naso-pharynx, whereas by posterior rhinoscopy the lower border of the vegetations often appeared higher than natural. The vegetations lie, of course, somewhat behind the choanae, so that when seen from behind and below in the mirror they seemed to lie further away from them than one would expect from the direct investigation from in front. [Anterior rhinoscopy.] The form of the vegetations was generally papillary, either lying close together or hanging more perpendicularly, more rarely forming a smooth cushion-shaped swelling. In all the cases in which rhinoscopy was employed, this was seen to grow only from the roof and posterior wall of the pharynx; the fossæ of Rosenmüller and the Eustachian tubes were always free. The vegetations, as seen in the slightest cases, always presented by posterior rhinoscopy the form of small elevations projecting slightly beyond the arcades of the choanae. The other cases I have divided for the sake of this review into four classes, according to the different extent of the choanae which they covered. Exact descriptions of them were taken only in the 233 private cases.

Thirty-four times the vegetations reached the velum;

Thirty-six times they covered the inferior turbinal completely or in part,

Seventy-two times the middle one completely or in part;

Fifty-eight times they extended only to the upper border of the middle turbinal;

Six times there were only traces of these vegetations to be seen in the form of small elevations; and

Twenty-seven times the size of the growths could only be very imperfectly made out, or the notes are incomplete with regard to it.

The largest vegetations were found in children, the smaller ones chiefly in older people; still, there were many exceptions, and naturally we refer here to the relative sizes as compared with the lumen of the choanae. In 4 cases there was an unequal development of the vegetations, in so far as they extended much lower down upon one side. The treatment consisted always in the removal by means of a cold steel wire snare introduced through the nose, and the result was always controlled by posterior rhinoscopy. In the 233 private cases removal was complete in 113, in 9 only partial, in 46 cases the operation was refused, in 11 the snare was further used from behind, and in this way complete removal effected. Once Catti's forceps, twice the snare from behind only, and once Gottstein's ring knife were used in the operation. In the 152 hospital cases, regarding which there were frequently no sufficient notes,

62 are recorded to have been cured by means of a cold snare passed through the nose. This number is, however, according to my personal recollection, far too low, and is owing to the incompleteness of the hospital records. In order to review again the 233 well-recorded private cases, the cold snare passed through the nose was sufficient in 103 for the complete removal of the vegetations. In 24 the operation was not complete when practised from in front, because the formation of the nose prevented the introduction of the snare, or else its elevation in the nasopharynx owing to outgrowths and deviations of the septum, or through the proximity of the middle turbinated body to the septum. In the hospital cases I frequently used Gottstein's knife, Löwenberg's and Michael's forceps, Trautmann's spoon, or a wire snare introduced through the mouth, chiefly for the purpose of showing my pupils the mode of using these instruments.

The snare used by me is on Blake's model, with a closed tube of about twelve centimètres long, which at its anterior extremity is divided into two mouths by means of a bridge. The two ends of the steel wire are clamped behind between two roughened steel plates, fixed by means of a screw. This fastening is attached to the slide, and we have, therefore, a quickly-arranged and very powerful fixation for the wires without it being necessary to twist or wind them. This mode of fixation makes it possible to remove very resistant structures, such as hard vegetations, circumscribed hypertrophies of the turbinals, the anterior extremities of the middle turbinals, with their bone plates, etc., neatly and smoothly, as the instrument acts like an *éraseur*. In addition, it is very light and handy, and can get round all prominences, and pass through even narrow noses, as the diameter of the tube only reaches three millimètres. The most useful thickness of steel wire for adenoid vegetations is one of 0.36 millimètres, as with this thickness the snare keeps open most easily. The operation is conducted in the following way:—Both nasal passages are cocaineized by means of a twenty per cent. solution of hydrochloride of cocaine on cotton-wool swabs from before backwards as far as possible, extending into the naso-pharynx, for one or two minutes. Then the snare, placed vertically, is passed through the inferior meatus, with or without the guidance of the light, until it reaches the naso-pharynx, when the handle is to be lifted up so that the snare may pass underneath the vegetations, and the instrument is then turned through a right angle, so that the snare comes to lie horizontally. The instrument is now drawn back so far that the wire may touch the septum (which is easily recognized by tactile sense), and then the handle of the instrument is lowered so that the vegetations may come at their point of attachment within the grip of the snare. A simple closure of the snare is then sufficient to effect their removal. As a rule the pieces thus removed, which attain often the size of a hazel nut, cling to the tube, or come out, after the removal of the tube, into the nose, and then can easily be removed by blowing, or, what rarely happens, they may fall into the pharynx. This takes place only rarely, because ordinarily a few fibres remain held between the snare and the bridge at the mouth of the tube. This proceeding is on either side to be repeated from three to four times,

and the tube is either kept perfectly straight or pushed further outwards or inwards so as to remove all the growths—that is to say, also those growing from the side or behind the septum. The hemorrhage is very slight, so that subsequent syringing with ice cold water is unnecessary. The pain under the cocaine is completely absent or very slight, and the reaction minimal. Only once out of all the cases was there next day a swelling of the cervical lymphatic glands, and never suppuration in the middle ear as a result of the operation.

With reasonable children I used no assistant, and at most the mother supports the patient's head from behind. Unruly patients, on the other hand, have to be wrapped in a sheet, held upon the seat by an assistant, while a second one fixes the head. The after-treatment consisted in gargles of a mild solution of permanganate of potash. If the parents are very anxious, I operate only upon one side at a sitting, so that then two sittings at least are necessary. Often I have had several sittings, especially in the case of narrow noses and extensive growths, and I only perform the second operation when the nasal mucous membrane is no longer of a ruddy tint. A few days after each operation I make an inspection of the naso-pharynx in order to see if there are any remnants, and proceed then with the operation until the arcades of the choanæ and the tubes are to be seen quite free. My records of the 233 cases in private practice give a

Cure in one sitting	66 times.
„ two sittings	56 „
„ three sittings	33 „
„ four or five sittings.....	7 „
„ nine sittings.....	1 time.

The total of recoveries under the simple use of the snare from in front was 163. If we calculate along with these the 46 cases not operated on, there remain 24 in which this method had no result or only a partial one. The reason for this non-success lies in the unfavourable narrow build of the nose, which prevented the introduction of the open snare; otherwise the operation took place always with ease, even in very little children, as for example in two of three years old, two of four years old, eleven of five years old, five of six years old, and twelve of seven years old, and so forth. In the smallest child, which was aged only two years, the operation was not followed up. These statistical data are sufficient to show the practicability and certainty of the method in most cases, as well as its freedom from danger.

I have now to meet the objections which have been made against it. Before all, it is said it is only applicable in a very limited number of cases, namely, only in wide noses, but this is contradicted by my statistics. Further, it is said only to be available in papillary pedunculated growths. This objection I cannot with certainty contradict, as I only saw and operated on growths of this kind. Still the snare also proved its usefulness in some cases of hemispherical flat hypertrophies of Luskha's tonsils, as can be seen in the preparation shown of one of the size of a walnut, which was removed by means of the snare from in front.

Again, the objection is offered that the snare introduced from in front

cannot grasp small growths situated high at the border of the choanæ, which is incorrect, as also the objection that it does not snare the vegetations at their base but lower down. In the next place, experiment shows that a straight probe introduced from below into the nose and left to itself touches the upper border of the choanæ; the same tendency is shown by the tube of the snare. It has to be purposely pressed down in order that the loop may come under the vegetations, and it can then be easily lifted into the fornix of the pharynx by a vigorous depression of the handle of the instrument. In this way I frequently removed flat hypertrophies of the pharyngeal tonsil lying in the vault of the fornix, and above the upper edge of the choanæ.

The best proof that this method is at least not inferior to others is that I removed completely in 7 cases vegetations which previously skilled colleagues had been unable to eradicate wholly with forceps or ring knives.

Lastly, the objection that several sittings may be required is not borne out by statistics, since it was often only out of consideration for the anxiety of the parents that I had a separate sitting for each side, where one sitting would have sufficed for both sides, and in 66 cases one sitting alone was sufficient. In addition, it is well known that in other methods often several sittings are necessary. The objectors state also that the vegetations are removed, not as a whole, but in small pieces. That is correct, but in my cases the growths were chiefly papillary and pedunculated, and fell apart very easily, and, besides, the pieces were generally as large as hazel nuts. Further, this objection has little value, as the only question is the complete removal of the vegetations, whether it be in one or several pieces.

The advantages of the method lie particularly in its absolute freedom from danger, since with a snare introduced into the naso-pharynx from in front nothing can be seized except the vegetations. Next, the exceedingly slight degree of bleeding, the absence of reaction, the painlessness (this is confirmed by all the older patients), and the possibility of carrying it out without narcosis by means of simple cocaine anaesthesia. As assistant, usually the child's conductor is sufficient, who supports the head from behind, and it is only with very unruly children that it is necessary to wrap them in a sheet and have them held by one assistant while a second fixes the head. As after-treatment I order gargles of weak solutions of permanganate of potash, some of which are poured through the nose. In every case this method is the most protective, as I have assured myself, having only used other methods for comparison. The galvano-cauterization, or removal by means of the galvano-caustic snare, I have never made use of, as the first is very troublesome and takes a long time, the latter quite unnecessary, as the cold snare is always sufficient for removal, and both are dangerous on account of the effect of the heat upon the walls of the naso-pharynx, and especially upon the Eustachian tubes. Among forceps I tried those of Catti, Loewenstein, Michael and Jurasz. With them one twists and forces more than one cuts; there is considerable bleeding; the instrument has to be frequently introduced; the sittings have to be often repeated, and

there is a considerable amount of reaction. Trautmann's sharp spoon works better, but it has similar disadvantages. The best, in my opinion, is Gottstein's ring knife, still it is only thoroughly suitable for the soft papillary vegetations; the bleeding is considerable, and so is the reaction. Frequent introduction and numerous sittings are also often necessary.

On these grounds I have kept to the use of the cold snare through the nose, and I am so far satisfied that I never use for the removal of soft benign growths of the naso-pharynx instruments which frequently wound and tear the naso-pharyngeal mucous membrane considerably.

When this method was not practicable, I tried next a snare, with a bent loop passed through the mouth, or when on account of too great resistance that did not succeed, I used Gottstein's knife, which is on the whole very speedy and practicable, but which often misses the papilliform vegetations.

Finally, I would like to point to the fact that none of the instruments hitherto constructed seem quite satisfactory, because almost every practised specialist has a new one prepared for him.

REVIEW.

Politzer.—*Text-Book of the Diseases of the Ear and Adjacent Organs. For Students and Practitioners.* Translated by OSCAR DODD, M.D., Assistant Surgeon at the Illinois Charitable Eye and Ear Infirmary; Clinical Instructor of the Eye and Ear in the College of Physicians and Surgeons, Chicago. Edited by Sir WILLIAM DALEY, F.R.C.S., M.B. Cantab.; Consulting Aural Surgeon to St. George's Hospital. With 330 original illustrations. Baillière, Tindall and Cox. London, 1894.

Those who are familiar with the late Dr. Cassells' translation of the first edition of Prof. Politzer's encyclopædic work must have felt somewhat tantalized to know of subsequent German editions remaining untranslated, and they will welcome all the more gladly the long-wished-for advent of a more recent (the third) edition rendered into English. The anatomical section is almost a reproduction of what appeared in Dr. Cassells' translation, enhanced, however, by the addition of at least fourteen fresh illustrations. The physiological portion is amplified, among other notable additions being the account of Hansen and Bockendahl's, Pollak's, Secchi's, and Lucae's experiments on the action of the intra-tympanic muscles. The methods of examination are, as before, treated with the utmost practical minuteness, prominence being given to Delstanche's additions to our armamentarium for rarefying or condensing the air in the external meatus. The use of the voice as a test for hearing is still more strongly advocated and more thoroughly methodized, while stress is laid on the necessity for testing by means of tones of different pitch. Prof. Politzer's method of testing the permeability of the Eustachian tubes and the seat of the cause of deafness by means of a vibrating tuning-fork held under the nostril is a novelty (p. 135), but