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ADENOID GROWTHS IN THE NASO-PHARYNX,

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MR. CHAIRMAN AND GENTLEMEN.—Dr. Henty having kindly asked me to say something this evening in connection with the branch of surgery in which I am more particularly interested, I propose to make a few remarks about adenoid growths in the naso-pharynx, commonly called post-nasal growths. I have decided on this disease, as I think it is one that should claim the special interest and attention, not only of the specialist but of every practitioner of medicine and surgery from the fact, that, although it is very common, is easily diagnosed if properly looked for, and as easily got rid of if properly treated, the whole future health and prosperity of a child is at stake if the existence of these growths is not recognized and a correct line of treatment carried out, and yet the fact remains that their presence is often overlooked, and, as an instance, only last month a boy was brought to me, a naval cadet on the *Britannia*, aged fifteen-and-a-half, who had been gradually getting deafer, and had at last been told by the authorities that if the deafness continued he would have to find some other berth, as he was too deaf for a sailor. His tonsils had been removed some four years previously, and the medical officer in charge of the ship having declared

that there was nothing further to be done for him, his family doctor brought him to me. I found the naso-pharynx full, operated on him the next day, and now he is back on his ship almost well, but on account of the length of time the growths had been present some Politzerisation is required to complete the cure. Fortunately for him his ear trouble was due more to mechanical obstruction than irritation, and so he escaped bad consequences—but that the disease had existed for some time, and had been overlooked, was evident from his deafness, and from the nickname of "the fly catcher," by which he had gone at school and on board.

The obstruction this disease causes to the proper performance of normal respiration prevents sufficient air from entering the middle ear through the Eustachian tubes, and the balance of equilibrium being thus upset the atmospheric pressure drives in the drumhead, and this pressure being conducted along the chain of ossicles is exerted on the fluid contents of the labyrinth, causing a tension that will produce a most distressing tinnitus, accompanied at times by vertigo. The irritation, too, caused by both the growths, and the habit of oral breathing, to the mouths of the Eustachian tubes, will produce an inflammatory condition which spreads up the tubes into the cavity of the tympanum, causing that chronic catarrh so fatal to good hearing, and which by the swelling of the lining membrane of the tube shuts in all secreted mucous and inflammatory products, these will become hardened around the ossicles and tympanic cavity, and produce the consequent permanent deafness and tinnitus or, again, a suppurative condition of the middle ear with a perforation, and all its serious and at times even fatal sequellæ may result. The ear, however, is not the only organ of the body that is affected, for the chest, the teeth, and even the brain may suffer, and a permanent delicacy of the constitution be established. The chest is

affected in both its walls and its contents; the deficient amount of air inspired causes the walls to fall in, the intercostal spaces to become deepened and the cartilages deformed, producing a form of pigeon breast, whilst the unfiltered and unwarmed air passing by the mouth only carries cold and impurities to the lungs to breed disease in those organs. The teeth, exposed to the drying influence of the air, especially at night, when the mouth is wide open for hours without being even temporarily closed, become the resting places of various micro-organisms, and these not being washed away by the action of the saliva, lips and cheeks, produce caries, whilst a contracted dental arch and a lofty palate are frequently seen accompanying this disease. That the brain may be affected is palpable, from the semi-idioticy of manner and expression, and the peculiar shuffling walk so often seen in these cases, aptly expressed in the rhyme :—

"Her face was not a type of beauty,
Betokened rather Brain off duty."

The growths, which seem to be more partial to the males than the females, are essentially a disease of childhood and early youth, the largest number of cases occurring between the years of six and nine, and out of over eighty cases operated on by me last year, the youngest was three, and the eldest sixteen years old, but on the 28th of last month I removed the growths from a woman of twenty-seven, kindly sent me by Dr. Quick; and some two years ago I operated on a woman who had reached the age of twenty-eight, this latter is, I believe, a limit record. The greater number of the children are in various stages of ill-health, from the ordinary speaking delicate child to the thin, pale, scrofulous one so often met with in the out-patient department, but, on the other hand, some are quite healthy and ruddy looking.

The disease is generally congenital, and dampness in both residence and atmosphere seems to be conducive to its

development; and although among the eighty cases I had last year, in only one instance, two brothers, and in another, a brother and sister, were affected, yet at times you find whole families suffering in a more or less degree—some of the deformities and other consequences being present in the parents; therefore, I think I may say that heredity has its share in their production. Their structure, as you can see in these specimens, is principally adenoid tissue, covered by a cylindrical epithelium, and the situation they occupy is generally the vault, the posterior wall of the naso-pharynx, and on the pharyngeal tonsil (a bed of adenoid tissue in the vault of the pharynx). The growths, which may be few and thinly scattered, or may entirely fill up the naso-pharynx, vary in size from a pea to large masses that hang down, and are partially visible behind the soft palate. There is also frequently a simple enlargement of the pharyngeal tonsil without any other independent growths, and this may cause the same train of symptoms. These symptoms are those due to an obstruction to the proper performance of hearing and respiration, and, in addition to those I have already alluded to, we may get nasal speech diminished, so that the voice is altered and deficient in resonance, the m's and n's becoming b's and d's, &c.; and as in the poem before-mentioned, on Mayer's first patient:—

"The m's and n's seemed most to try her,
She called her doctor 'Bister Bayer.'"

There is also snoring, restlessness, and fright at night among the younger children, and loss of smell and, to a certain degree, taste. One or all of these may be present, and they vary with the position and size of the growths; thus, a small one covering or pressing on the Eustachian orifice may cause deafness, and no nasal obstruction; and, on the contrary, blockage of the posterior nares may cause the nasal obstruction, without deafness.

The length of time the symptoms have lasted before treatment is applied for, and the condition of the middle ear, must make a considerable difference in the prognosis, for, if taken in time, there is no class of cases that give such favourable results, the general health shows marked and immediate improvement, the stupid look disappears, and the hearing power rapidly gains strength, though the assistance of Politzer's Inflation may be necessary. In fact, some of the little patients declare they can hear better in twenty-four hours. But, on the other hand, if brought late for treatment, a chronic middle ear catarrh, suppurative or otherwise, may have made such ravages on the delicate contents of the tympanic cavity, that the hearing power may be either greatly impaired or entirely lost. The friends and relations of the little patients, with a natural dread of all operations, frequently ask if they will not grow out of them; and there is no doubt they will, for, as a rule, the growths have shrunk away by the age of twenty. But this should never be allowed to weigh with the medical attendant, for while they are growing out of them, the mischief is accomplished beyond repair. Early operation should therefore always be insisted on. The diagnosis is easily arrived at if the precaution is taken of always making a digital examination of the naso-pharynx in all cases of nasal obstruction in children that come for treatment, for it is almost impossible in these cases to examine the posterior nares with the rhinoscope. If this precaution is not taken, the presence of these growths may be overlooked, when they are complicated with an hypertrophic rhinitis, or hypertrophied tonsils, and occasionally a nasal polypus situated far back in the posterior nares; or still more rarely, a naso-pharyngeal polypus may be mistaken for them; but all these difficulties disappear if the trouble is taken to simply pass the finger into the naso-pharynx; and the

best way to do this is as follows :—First paint the pharynx and fauces with a 20 per cent. solution of cocaine ; stand behind the patient, and having first placed a towel over the head—and the reason for this in hospital practice is very frequently too sufficiently obvious—pass the left arm round the neck, and place the left thumb on the front teeth of the lower jaw, taking the precaution to cover the thumb with the end of the towel if the teeth are sharp ; you will thus have immense power over the patient, and be able not only to prevent him from closing his teeth on your fingers, but, having got his head in chancery, prevent him from moving it. One might almost misquote the song of Mephistopheles in "Faust up to Date"

> "They may wriggle, they may struggle, but I have got them in Chancery ;
> And I'll have them (the growths), I will have them—yes, I will have them by and by."

Pass the fore-finger of the right hand quickly and gently to the pharynx, and hooking it round the soft palate, carefully search the regions of the Eustachian orifices, the posterior nares, the vault and wall of the naso-pharynx, and the pharyngeal tonsil. If growths are found, it is as well to take the opportunity of giving the soft ones a scraping with the finger nail, for in this way many may be removed, and in some cases, where the growths are few and soft, nothing else is necessary.

With regard to treatment, there are not the proverbial three courses open, but only two : that is either to destroy the growths by the galvano-cautery or caustics, or to cut them away ; and a variety of instruments have been devised to these ends. For the destruction by cautery, an electrode, the platinum end of which is completely surrounded by bone should be used ; this is guided to the growth by the fore-finger of the left hand, the point is then exposed and the

current turned on. For a caustic, nitrate of silver or chomic acid are best. They should be fused in a platinum crucible, the end of the probe is dipped in and lightly coated, and then conducted to the growth in the same way as the cautery. I have no great faith in either of these methods, and only use them in cases of pronounced bleeders, where other ways are impracticable. To remove the growths various forceps, ring knives and curettes are used, and all are more or less useful; such as Meyer's oval cutting ring knife, Mackenzie's sliding forceps, Löwenberg's forceps and post-nasal curette, the armed finger sheath with its cutting edge, and a variety of others; but the instruments I always rely on now are Gottstein's newest pattern ring knife, my own unprotected finger nail, and Woakes' modification of Löwenberg's forceps, the modification consisting in the prolongation backwards of the cutting edges, and an extra twist in the blades. This year I have operated on, at least, one case a week, and I have used nothing but Gottstein's knife and my finger-nail. The knife is shaped to fit the vault of the pharynx, and has the very great advantage of being quick in its action and safe; the only drawback, I at present see to its use is that, as a rule the growths thus cut off are swallowed, and you cannot show them to the patient's friends. When operating I always have the patient under chloroform. I consider this the best anæsthetic in these cases for these reasons. 1st, other anæsthetics do not keep the patient sufficiently quiet; 2nd, that the vapour can be easily blown into the mouth while you are operating with a Junker, and so the effect kept up. 3rd, Children, who are almost our only patients, take chloroform, as you all know, very well; and lastly, the sickness that follows comes not as a curse, as it does in some cases that require perfect quietness after the operation, but rather as a blessing, for it helps to get rid of

any blood that may have been swallowed. Some aurists give no anæsthetic, and Chiari, of Vienna, who is said to be one of the most skilful of operators in these cases, removes them through the nose, with a ring knife without one, but, as we are not all Chiaris, and it is our duty to give as little needless suffering and discomfort to the patient as possible, an anæsthetic ought, I think, to be given; for putting aside the question of actual pain, the fright and shock to most children must be very great; and another consideration is that it gives less trouble to the operator. With regard to position too, some prefer the head hanging over the end of the table, so that all blood may flow out of the nostrils, and none be swallowed or inhaled, but I do not see any necessity for this, it makes, if possible, a greater mess, and I think one has more room if the patient lies perfectly straight. I have only once had a slight complication from inhaling blood, in all the cases I have operated on, and as far as I can gather from others they are extremely rare. In my case, a private one, the patient was very delicate, and on the second day there were some slight pneumonic signs on both sides, which I put down as the result of inhaling a small quantity of blood. There was also some gastritis and sickness after food. She, however, I am glad to say, got perfectly well in a few days. When under chloroform a gag should be placed in the mouth on the opposite side to which you stand when operating. The ring knife is then passed behind the soft palate, and pushed to the vault, then one sweep down the centre and one on each side, will be found sufficient to clear the naso-pharynx in most cases, but should any small portions remain behind they will easily come away when scraped with the finger nail. There is, perhaps, a little more bleeding at the time than with the forceps, but this is amply compensated for, by the rapidity with which the operation can be completed, the time and

trouble there sometimes is in catching the very movable growths frequently found in the pharyngeal wall, and the continual mopping with the sponge one sometimes sees is also avoided. If the forceps are employed, pass them along the first finger of the left hand until the growth is reached, and cut it off close to the mucous surface—do not pass the forceps without the finger as a guide, as I have seen done and as a consequence on one occasion the whole of the mucous membrane covering the posterior part of the septum, with a portion of the bone itself came away. The finger should not be withdrawn, if possible, until the space is cleared; there is seldom or ever any necessity, if the patient is kept quiet, and there is no vomiting to keep applying the sponge and endeavouring to staunch the bleeding each time the forceps are removed, it needlessly prolongs the operation, and the finger and on occasions a great portion of the hand, serves to a certain extent as a plug. To the uninitiated there always seems an enormous quantity of blood, and for this reason it is advisable not to allow any lay friends or relations of the patient to be present if it can possibly be avoided; the bleeding as a rule, stops immediately the gag is removed. It adds greatly to the comfort of the patient if some warm water is syringed gently through the nostrils and allowed to run out through the mouth before he comes round, as it washes away clots and *débris*. For after-treatment I generally leave the patients alone for twenty-four hours, keeping them in bed, if possible. The next two or three days I have a warm boracic wash syringed through the nostrils twice a day; and then an alkaline wash, such as borax and bi-carbonate of soda, āā. grs. x., three grains of carbolic acid and perhaps three minims of tincture of iodine to an ounce of water; this should be warmed and sniffed or sprayed through the nose twice a day. It has to be continued for a

varying time, from a week or two, to months, the latter time being required when a chronic hypertrophic rhinitis co-exists.

When possible, operate at the patient's home, or wherever they are staying, or take them into a nursing home or hospital for twenty-four hours; or if they are obliged to go home warn them against the danger of taking cold, for in a few of my cases, where otorrhœa existed, the discharge was increased, in one or two instances an old one re-appeared, and in one case, a rather severe attack of acute middle ear suppuration set in, with an inflammatory condition down the sterno-mastoid, accompanied by great pain. All these complications occurred in hospital patients who returned home within an hour or so of the operation, and caught cold going home. They happily all got well, but in the last case the result was some loss of hearing power. The time taken to effect a complete cure varies from a week or two to a few months—the longer time being more especially necessary when chronic rhinitis complicates the case; but in an ordinary uncomplicated case, the patient is generally well in a week.

There is one other rock a-head I might mention before sitting down, and that is an hæmorrhagic diathesis. It is rare, and can to a certain extent be steered clear of, if a little trouble be taken to enquire into the patient's history. These unfortunates must, as I said before, be treated by caustics or cautery. I have only seen one case where a complication of this sort occurred; it was not one of my own, but I happened to be present, and the only way the bleeding was controlled was by thoroughly plugging the naso-pharynx with antiseptic wool, and this had to be left for some considerable time. A rather extraordinary case also occurred, I hear, a short time ago at one of our London hospitals. After the removal of a few growths

there was a sudden gush of blood, with immediate death as the result. "The operation was performed with Woakes' modified Löwenberg forceps. The posterior wall of the naso-pharynx had been cleared, and the operator was proceeding to remove a growth from the right side, when the fatal gush of venous blood took place. Unfortunately no post-mortem was allowed, but the supposition was that an enlarged vein of the pharyngeal plexus was torn down." This is how the case was related to me. We know that the veins of this plexus are at times very large, but this hardly explains to my mind the almost instantaneous death. It, however, directs attention to a most serious danger in these cases, and I think is a point scored in the ring knife's favour. I can only repeat, what so often has been said, that it would greatly add to our knowledge if men would only publish their failures as well as their successes.