TREATMENT

—OF—

Nasal Growths and Hypertrophies.

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REPRINT FROM "VIRGINIA MEDICAL MONTHLY," NOVEMBER, 1886.

Treatment of Nasal Growths and Hypertrophies.*

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I would ask your kind attention to a few very practical remarks on the treatment of the so-called hypertrophic nasal catarrh; to the methods now employed in specialty practice for removal of nasal polyps and post-nasal tumors; for the destruction of anteroir and posterior hypertrophy of the turbinated bones, and of adenoid vegetations of the pharyngeal vault.

It is safe to say that the only way to permanently remove these *results* of catarrhal inflammation is by surgical procedure, and the three methods now generally employed are:

1. Caustics, chiefly chromic or mono-chloracetic acids.
2. The cold snare.
3. The galvano-cautery.

I. *The Removal of Nasal Polypi.*—Numerous methods have been proposed from time to time for the removal of these tumors, but that most often used now is by means of the wire écraseur, or cold snare. We have many good snares—Hilton's, Wilde's, Schroetter's, Jarvis', etc., a number of which I have here. The operation is simple, painless, and free from any but slight hæmorrhage. The loop, of course, can be made of any size, and the elasticity of the piano wire enables it to retain its shape after overcoming the obstacles to its introduction. When the polypi are confined to the

* Read before the Medical Society of Virginia, October 28th, 1886.

anterior nares, the wire loop may be passed round them with little difficulty, and the tumor cut through close to its base; when the polyp is situated high up or posteriorly within the nasal fossæ, the procedure is more difficult, and in such case the pistol-shaped snare of Bosworth will be found to facilitate matters. Since the introduction of cocaine all operations on the nose have been greatly simplified, and by a free application of this anæsthetic many polypi may be removed at one sitting. Occasionally, when a large polyp is seen in the posterior nares, and hanging down into the pharynx, it is necessary to pass a silk thread through the nares; the nasal end of the thread is then attached to the loop of the snare, and by pulling upon the lower end of the string the snare is drawn into the naso-pharynx. It may then be slipped over the polyp by manipulation with the operator's fingers.

When this removal of the body is completed the nasal passage should be thoroughly cleansed, and the base of the polyp touched with chromic acid or burned with the galvano-cautery. Finally, this method has great advantages, but there are many cases where the number, size, density, and position of the tumors make their removal with the cold snare well nigh impossible, and, in such cases, it has been my custom to employ the galvano-cautery. The great objection urged against the too free use of the cautery in such cases has been—first, that the battery itself is troublesome and expensive; second, that adjacent and healthy parts may be burned; third, that serious aural complications may follow.

In my own experience these objections do not hold where the cautery is employed to destroy polypi. Beverly Robinson says in this connection: "Where there are many polypi and there is a swollen and hypertrophic condition of the pituitary membrane, it is indicated to make quite an extensive application of the cautery; for it removes more certainly any remains of morbid growths, and renders their recurrence less likely than by any other known method." Morrell Mackenzie, too, "considers it far the best method of treatment."

The galvano-cautery has become such an indispensable agent in specialty practice, and the various batteries now ad-

vertised being so expensive and so worthless, I am glad to be able to call attention to a form of battery I have used for some time, and one of which I have here. This is a *Storage battery.* It is convenient, inexpensive, and portable. When well stored, it will last for two months or more, being always ready for use and giving a steady, constant current, the strength of which may be regulated by the reostat.* So much for the battery itself. I cannot illustrate my personal use of the cautery better than by the following case:

An old gentleman of some sixty-seven years, was sent to our office from an interior town for relief from nasal growths. On examination, both nostrils were found packed with tough, fibroid tumors, as was also the post-pharyngeal space—the polypi pressing forward the soft palate. Three, each as large as my thumb, extended downwards from their attachments into the pharynx, actually touching the base of the tongue. The patient stated that he had not breathed through his nose for twenty odd years; we thought the tumors had been growing for thirty. I immediately set to work with a galvano-cautery knife. I cannot say that I pursued any very definite method, beyond plunging the white-hot knife into the centre of the various polypi. They were thus rapidly destroyed, and in a few sittings both nostrils were cleared of all the anterior tumors. To get at the posterior polypi was by no means so easy. The soft palate was drawn well forward by a soft rubber tube, which was passed through each nostril and drawn out the mouth. The tumors, being thus exposed, were easily destroyed with a post-pharyngeal electrode.

After six sittings, the patient was dismissed, and I have heard nothing to lead me to suppose that the cure was not complete. Of course, a large of amount cocaine was used during the operation. The hæmorrhage was much less than might have been supposed, and the patient did not complain of any great amount of pain. In this case the lining membrane itself was but slightly burned. I was, however, especially careful of the Eustachian tubes when operating behind. Finally, I now use the cautery in all cases of mucous or fibrous polypi when the patient will consent.

II. *The Removal of Hypertrophied Membrane over the Turbinated Bones.*—This condition of the membrane covering these

* This particular form of battery is manufactured under the supervision of Mr. W. W. Donaldson, by the Viaduct Manufacturing Company, Baltimore. It has this additional advantage: The same battery will run an electric light, electric bells, and an induction coil.

bones, both anteriorly and posteriorly, the so-called hypertrophic rhinitis is, as you know of very frequent occurrence, and brings with it an exceedingly annoying train of symptoms. Hypertrophy of the erectile tissue steadily increases with the degree of irritation to which the membrane is subjected, and the disagreeable symptoms increase in proportion. The patient experiences an alternate stoppage and patency of the nostrils from the inhalation of dust or vapors, and indeed from anything which favors the flow of blood to the part, change of temperature, etc. The stenosis in such cases is nearly always anterior. Posterior hypertrophy, however, is frequent, and would seem to be more particularly felt in damp weather. It shows itself, according to Jarvis, in sudden and partial deafness, and, indeed, this author declares that this form of trouble is too often treated for middle-ear catarrh, when, in fact, the deafness is really due to the pressure of an hypertrophied posterior turbinated upon the Eustachian tube. Finally, not only are attacks of acute coryza due to this form of hypertrophic rhinitis, but true hay fever, as well as an irritating cough, are often dependent upon the enlarged and hyper-sensitive condition of this erectile tissue; and, as we shall see, such attacks may be entirely prevented by its removal. For the cure then of this condition of hypertrophic rhinitis, we must destroy the superfluous tissue, and this may be done in several ways.

Caustics are frequently employed for their destruction, and those most frequently used are chromic, acetic and monochloracetic acids. Personally, I am accustomed to use chiefly chromic acid. The method of procedure is briefly as follows: Having applied a four per cent. solution of cocaine to the membrane, the crystal of chromic acid is applied directly to the desired spot by means of a shielded applicator (such as I have here), and the surface then wiped with a solution of sulphate of lead and glycerin. The pain is but slight, and six or eight applications generally suffice to destroy all the tissue desired. After the application, the nasal mucous membrane becomes much swollen, and indeed the objection to this treatment is the sneezing and coryza which so frequently follow its application. This,

however, never lasts long. In the course of a day or so there is an exfoliation of membrane, and considerable reduction of the hypertrophy. I have rarely seen any ulcerative condition follow the application of this acid, and, as a rule, it is very satisfactory, and will often be borne by patients who refuse to allow the use of a snare or galvano-cautery. In the treatment of children, it is almost indispensable. The treatment by this particular agent was first used I believe by my father, Prof. Donaldson.

Another excellent procedure for the removal of anterior and posterior hypertrophies is that employed by Jarvis, of New York. He prefers to cut off the infiltrated and redundant tissue by the cold snare, spoken of before. The wire noose is passed over the growth, which is gradually cut off by the increased traction. When the hypertrophy is large and situated anteriorly, the removal by this method is simple; when it is situated further back, however, it is much more difficult, and it is then necessary to transfix the tissue with a long needle. The advantages claimed by Jarvis for his method, are the slight pain and hæmorrhage (provided the snaring is done slowly), the rapidity with which the tissue heals, the permanent opening of the nostril which the cicatrical contraction causes, and, finally, the ease with which the operation is performed. In my own experience, however, the drawbacks to this surgical treatment have been manifold. The length of the operation—one or several hours is required, for unless the traction is very gradual, considerable hæmorrhage may result; the very considerable and long-continued pain which it invariably causes, and, finally, the ease with which the operation *is not* performed. Jarvis himself is the most skillful operator with the snare, I suppose in America; but I am sure most of those who operate upon the nose will agree with me in saying, that to properly snare a posterior hypertrophy is one of the most difficult operation in rhinology.

After all, the most satisfactory method of destroying turbinated hypertrophies is by the galvano-cautery. It is moreover especially applicable in cases of complete stenosis, in which it is desirable to destroy the redundant tissue

throughout the entire length of the anterior and under surface of the inferior turbinated bone, and where there is also hypertrophy of the membrane covering the septum. In the former case the cautery knife is introduced, if possible, underneath the hypertrophied tissue, the current turned on, and the mass severed from its connection; this is rapidly accomplished, a second or two sufficing for its destruction. Sloughing follows; and during the process of healing, metallic sounds should be introduced daily until cicatrization has taken place. Of course, more than one burning may be necessary. In destroying the lesser hypertrophies, care must be taken not to destroy too much of the tissue. Shurly thinks it better in such cases to apply the edge of the knife to the membrane, commencing as far back as necessary and drawing the knife forwards; if the broad surface is applied, he thinks there is danger of burning too much tissue with a strong stream, while with a weaker one the surface of the membrane only is burned. This burning, however, is of little effect, since the mucosa *must* be penetrated, and the sub-mucosa, cut, in order to insure success. There can be no doubt of the convenience and efficiency of this method of treatment; but serious accidents may result from an incautious use of this agent. As we have said, these accidents are not so likely to follow its application to nasal or post-nasal growths; but in the burning of hypertrophied tissue, Cohen has seen extensive sloughing of the nasal tract and inflammation of has the nasal duct and conjunctiva, as well as facial erysipelas involving the facial tissues. Daly has seen otitis media result from accidental burning of the rim of the Eustachian tube. However, with a well dilated nostril, proper insulation of the knife, a good battery—care being taken that the platinum is not too thick to become raised to a white heat instantly—and then with a steady hand, and keeping the knife in place for a second or two only, such accidents need not be feared (Wagner), and the cases will proceed to a satisfactory termination.

The Destruction of Adenoid Vegetations of the Vault of the Pharynx.—By adenoid vegetations of the vault of the pharynx, we mean an hypertrophied condition of the group or

aggregation of follicles, known as the pharyngeal or Luschka tonsil. They are the cause of so much trouble and annoyance that it may be well to give a few words to their pathology and diagnosis. Microscopically, these vegetations consist of cylindrical epithelial cells grouped together, and separated by a small amount of connective tissue, containing many blood vessels. The normal appearance of the vault of the pharynx varies so much that it is difficult to say what may be considered its morbid look. However, when the glandular elements in this region take on a morbid growth, the bulk of the tissue becomes much enlarged, assumes the aspect of rounded or pedunculated masses, and covers a large area. "Whenever this tissue is moderately developed, and closely examined, there will be seen upon its surface numerous depressions, which are either the external orifices of the acinous glands contained in its structure or the marks of depressed follicles. It is usually soft in consistence." (Robinson.) Adenoid vegetations occur mostly in early life, or at adolescence, and their configuration differs greatly. In some instances they hang down from the vault, and have been likened to a bunch of grapes; in such cases the mass is large, pedunculated, with smooth surface, and of pink color.

Lœwenberg thinks those of lymphatic temperament predisposed to these growths. In my own experience they have occurred most often in delicate and scrofulous children. The vegetations will usually be found covered with a greyish viscid mucus, which is difficult to expectorate. Speaking generally, however, not as much post-nasal discharge comes from these growths as from those cases of nasal catarrh with smooth but general hypertrophy of the naso-pharyngeal mucous membrane.

One of the most characteristic symptoms of glandular hypertrophy of the vault of the pharynx is a want of clearness in enunciation, and of vocal resonance generally—a certain "deadness" of the voice. There is impaired hearing and deafness from direct pressure upon the orifices of the Eustachian tube, or from congestion which may extend into them.

So much for this particular form of hypertrophy. Its treatment, or rather its destruction, is so necessary for the cure of the many troublesome symptoms, and the disgusting discharge which it causes, that we may be excused for giving it somewhat in detail.

Among the curative methods of treatment, perhaps the simplest is by repeatedly scraping the vegetations with the nail of the index finger. This procedure, however, is so distasteful to the patient, and of such doubtful efficiency, that I do not think there is any good excuse for resorting to it. Another method, and the one which Wagner most often uses, is by the use of post-nasal forceps, such as we have here. As you see, the blades are sharp and spoon shaped. They are introduced behind the soft palate, and there is usually little trouble in grasping the growths, and many may be removed at one sitting, especially if the rhinoscopic mirror can be used. In my own hands, this method has been generally effective, particularly where the vegetations are of the large, pedunculated variety.

In those cases where the hypertrophy is rather of the whole membrane, with occasional enlarged follicles, and where on inspection we find an extensive and thick pad of adenoid tissue, the best treatment is by chromic acid, or by the galvano-cautery. Beverley Robinson objects to the use of chromic acid, nitrate of silver, potassa fusa, Vienna paste, etc., on the ground that those which are sufficiently energetic in their action to destroy tissue to any depth cannot be limited readily in their application or their effect. However this may be, I have found chromic acid an excellent escharotic in these cases. I apply it my means of a shielded probe. The objection to it is the number of applications required before the requisite amount of tissue can be removed.

The removal of adenoid vegetations with the galvano-cautery I have found somewhat dangerous, and very painful, though cocaine was extensively used. The spiral, not the knife, should be used in such cases, and great care should be exercised not to impinge upon the Estachian tubes. The cautery, however, is often very useful in this class of cases.

One of the most satisfactory methods of removing adenoid

growths, when they are pedunculated and of large size, is by means of Bosworth's modification of Jarvis' snare. This instrument, as you see, has a suitable upward curve, to reach the pharyngeal vault. Before introducing the probe, the wire loop is given such a bend, that as the loop is gradually drawn into the canula, it presses more and more firmly against the post-pharyngeal wall. It thus scrapes, in its passage, the enlarged vegetations, and finally severs them from their connections. The excellence of this method (especially is it useful in young patients) needs no words from me. It requires, however, considerable skill in manipulation.

I have thus, gentlemen, passed rapidly, and I fear superficially, over the general surgical treatment of the various hypertrophies and growths found in the various forms of nasal catarrh. The subject is a large and important one, to which you must know it is difficult to do justice in so short a paper. I desire to thank you most truly for your courteous attention.

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