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TISSUES BY ÉCRASEMENT WITH THE  
COLD WIRE.

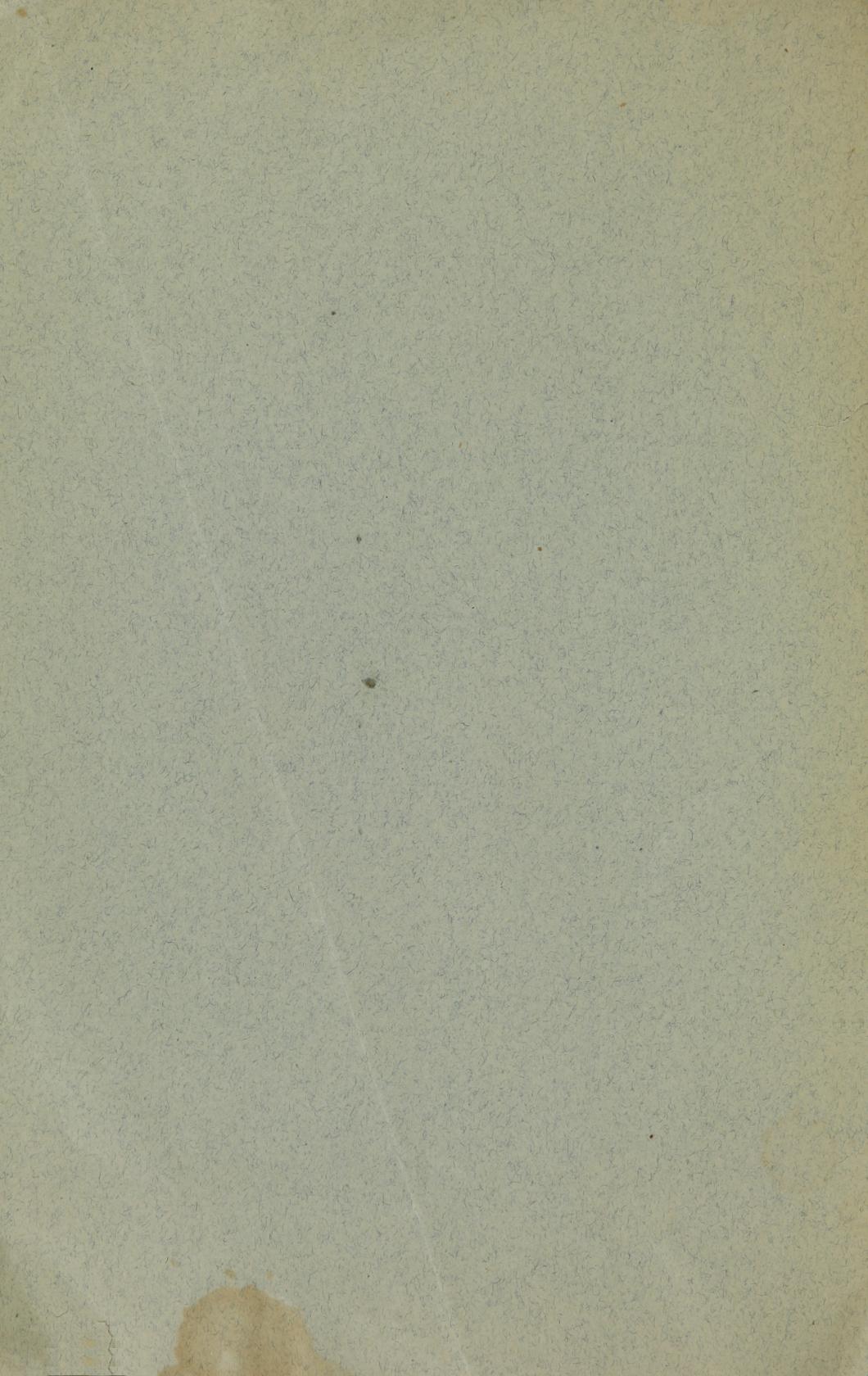
BY

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NEW YORK.

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COMPLIMENTS  
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REMOVAL OF HYPERTROPHIED TURBINATED  
TISSUES BY ÉCRASEMENT WITH THE  
COLD WIRE.

By WM. C. JARVIS, M.D.,  
NEW YORK.

I HAVE selected two cases of posterior turbinated hypertrophy and one of anterior hypertrophy from a number of the kind, as best illustrating certain points to be fully considered in my conclusions.

The écraseur used by me to remove these growths was shown to the American Laryngological Association in 1880. A description of the instrument, with the method of using it, can also be found in articles written upon the operation by Doctors Bosworth, of N. Y., Seiler, of Philadelphia, Knight, of Boston, and French, of Brooklyn.

CASE I.—Thomas S., aged 35, an engineer by trade, came into my hands for treatment, at the Bellevue throat clinic, after having visited dispensaries in this and other cities. According to his statement, he had contracted a chronic nasal catarrh from exposure in the late war. He had not breathed through his nose for fifteen years, nor was he able to distinguish odors. Hearing was defective, and had been so for many years. His wife said her husband was subject to fits of choking which came on when he was asleep, and gave her much alarm, making it necessary for her to arouse him.

On examining the patient's nose I discovered a large number of gelatinous polyps impacted in both nasal fossæ. Posterior rhinoscopy revealed a mass of hypertrophied tur-

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binated tissue reaching up toward the vault of the pharynx and projecting far beyond the soft palate. They were larger than any I had ever before or have since seen. Their color was somewhat lighter than that of the surrounding mucous membrane. The pharyngeal orifices of the Eustachian tubes were completely concealed by the hypertrophied tissues.

I removed the gelatinous polyps from both sides of the nose, using the *écraseur*. The patient was thus enabled to expel a small amount of mucus from the nostrils. On account of the irritability of his soft palate, it was necessary to tie up the velum with narrow elastic tapes, in order to obtain an extended view of the posterior nares.

I then snared a post-inferior turbinated hypertrophy occupying the left postnasal opening, and drew the wire loop tightly around the growth. The rubber bands were then divided, a small sponge being attached to the left one. This sponge, well saturated with an astringent, was drawn behind the soft palate against the growth, leaving the tape hanging from the anterior nares. The hypertrophy was then severed by the wire, more than an hour being occupied in its division. Traction being then made on the tape, the divided tissue was drawn out in front of the sponge. Only a few drops of blood were lost, and the patient said there was but little pain.

The hypertrophy occupying the right postnasal opening was removed like the first one, only its large size would not permit its passage through the nose. It was, however, hawked up by the patient, who up to that time was sure the operation had proved a failure, which was also the opinion of the two physicians who assisted me.

The result of this operation was a complete re-establishment of nasal respiration, thus enabling the patient to distinguish odors. The difficulty in his hearing was immediately remedied, it being unnecessary to elevate the voice whilst conversing with him.

I no longer use the styptic sponge as a precautionary measure to prevent hemorrhage in this operation, but would not hesitate to employ it in removing large postnasal fibroid tumors by the same method.

The patient returned several months afterward, with the statement that he had enjoyed a long immunity from his old troubles, but now complained of the slow return of the gelatinoid polypi, which I had warned him would be likely to occur.

CASE 2.—S. H., aged 53 years, was sent to me from Ohio, Jan., 1882. He gave the history of a long-existing nasal catarrh, accompanied by a copious expectoration of thick tenacious mucus. He had been seldom troubled with stoppage of the nostrils, and whilst under my observation, was free from any marked difficulty of the kind.

An anterior rhinoscopic examination showed the nostril to be perfectly free. Postnasal rhinoscopy, however, revealed the principal cause of the disease, a large posterior hypertrophy, which occupied a considerable part of the right nasal fossa. Its surface was irregular, and studded with a large number of small mulberry-like prominences. It presented a bluish-black discoloration, evidently indicating much venous engorgement. The turbinate tissues in the opposite postnasal cavity were not markedly affected. I concluded a copious hemorrhage would probably follow rapid section of the growth.

A wire loop was made to encircle the hypertrophied tissue, the combined mirror and tongue depressor being used to properly direct it. The patient was then given an easy-chair and the morning paper, and a watch was placed before him. He was instructed to make a partial turn of the milled nut every minute. This he did for four hours, when the pressure relaxed and I finished the operation, drawing out a mass of hypertrophied tissue of dense consistency, its substance being injected with blood clots.

The patient stated that the pain was not severe, and was principally referred to the teeth. About ten drops of blood trickled from the nostril, and this was all the immediate hemorrhage. No cotton was used to provide against future bleeding. My surmise as to the improbability of secondary hemorrhage proved to be correct, for the patient returned next day with the statement that none had occurred. The great length of time occupied in removing the hypertrophy may seem unnecessary, but in view of the nature of the growth and the feebleness of my patient it was a safe measure.

CASE 3.—Miss T. R——, aged 21, came to the Bellevue throat clinic, Feb., 1880. The patient stated she had no recollection of ever having breathed through the nose. The arch of the hard palate was high, and there was a preternaturally small postnasal space. The patient's upper lip was very small, and the underlying portion of the superior maxilla, receding. Her nose was broad and flattened, as if subjected to prolonged intranasal pressure. The lower jaw projected forward and was always open, giving the patient an oppressed expression of countenance often observed in cases of complete nasal stenosis. A rhinoscopic examination revealed extensive hypertrophies filling up both postnasal openings. The posterior hypertrophies were skilfully removed by Dr. Bosworth, with the wire *écraseur*. The stenosis, however, was found to be as great as ever in spite of the removal of these obstructions. An examination showed it to be due to the presence of very large anterior hypertrophies completely blocking up the anterior nares. Dr. Bosworth, in accordance with a request, kindly permitted me to test the efficiency of the transfixion needle<sup>1</sup> devised by me for the removal of sessile forms of turbinated hypertrophy in connection with the wire snare.

I transfixed the anterior hypertrophies and removed them with No. 0 piano-wire. Four sittings were required, one half of a hypertrophy being cut out at each operation. I discovered that the anterior hypertrophies had extended a considerable distance into the nasal cavity. The slight hemorrhage which followed section of the growths was quickly checked by a spray of persulphate of iron. Restoration of nasal respiration was perfect and permanent. The patient's surprise and satisfaction at what seemed to her a marvellous cure, were highly gratifying.

#### *Conclusions and remarks.*

I believe that it is often possible by carefully observing the configuration and color of large turbinated hypertrophies, to judge as to the probable occurrence of a profuse hemorrhage, and thus be enabled to take measures to prevent it. If the hypertrophied tissue presents a glistening mammillated appearance, its color being about that of the surrounding mucous membrane, or, as is often the

<sup>1</sup> These needles are manufactured by Mr. Ford, of this city, in four different sizes, running from one to four inches in length. Each number has a straight needle and three others of varying curves. They are all furnished with a convenient handle.

case, of a lighter hue, there will, as a rule, be but little pain and hemorrhage, and thus very slow traction is not so necessary. If the growth's surface is dotted with small mulberry-like projections, its color being similar to that of the preceding, slow traction is to be preferred. The substance of these growths, as has been pointed out by Dr. Seiler, of Philadelphia, is largely made up of fibrous tissue, and, as a consequence, the wire meets with great resistance in its progress through the mass. Growths of the same kind, having in part the appearance of the last variety, but differing from them in that they show a bluish-black discoloration, should be divided very slowly, three or four hours being consumed in their division, if necessary. In these cases Dr. Bosworth's<sup>1</sup> suggestion, to leave the divided tissues within the nose and next to the wound, in order to avoid disturbance and subsequent hemorrhage, may prove a valuable one.

I have never experienced any difficulty in controlling the hemorrhage which sometimes occurs after the hasty removal of anterior hypertrophies, by the use of a spray of persulphate of iron. If the solution is simply made to clot the blood as it flows from the nostril, it will probably prove an undesirable hemostatic. An endeavor should be made to build up a firm clot, beginning some distance within the nasal cavity. Irregular clots formed at the entrance of the nostril, which, by their obstruction, prevent the formation of deeper ones, should be carefully removed until a firm coagulum is obtained. I prefer this method of arresting hemorrhage, except in occasional instances, to the more common practice of using pledgets of cotton, as it is without the discomfort caused by pressure and is better proof against remote hemorrhage than lightly impacted pieces of cotton. It is also devoid of the discomforts due to putrefactive changes which take place around cotton left for a day or over night in the nasal cavity. Never having observed an injurious effect produced by the temporary contact of this form of clot with the nasal mucous membrane, I cannot recognize this as an objection.

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<sup>1</sup> *N. Y. Med. Record*, Oct. 29, 1881. *N. Y. Med. Record*, July 9, 1881.

The discomfort caused by the removal of these growths will vary with the susceptibility of the patient to pain, and the amount of care used in manipulating the *écraseur*. That the sensitiveness of the nasal mucous membrane varies in different persons is self-evident. The membrane of my own nostril, for instance, will easily tolerate a degree of irritation which in many persons would amount to absolute torture. I believe the question of pain is often a relative one.

The "considerable" pain referred to by Dr. Knight of Boston, in his article on the removal of post-inferior turbinated hypertrophies,<sup>1</sup> as experienced by the lady patient upon whom he operated, may have been either due to her sensitiveness, or the rapid traction made in removing the growth. The employment of my recent practice, explained in the latter part of this paper, of permitting the patient to make slow traction, would, I believe, have greatly lessened the discomfort complained of. It has been objected that the employment of slow traction, as recommended by me to prevent hemorrhage, consumes too much of the physician's time. This inconvenience has been overcome in the following manner. One side of the milled nut on the *écraseur* is inscribed with a graduated scale, easily read at the distance of a foot. The *écraseur* used should have another scale marked on the flat surface of the main canula.<sup>2</sup> (Any of the unmarked *écraseurs* devised by me can have the two scales added.) The size of the wire loop should be first ascertained by drawing its apex just within the orifice of the main canula, and observing the number of millimetres traversed by the secondary canula. Having found the size of the wire loop, and knowing how many turns are made by the milled nut in traversing a single millimetre, it is a very simple matter to compute the number of revolutions that will be required to sever a growth. The patient can be placed behind a screen or in another room, having a watch before him, with instructions to make partial or complete turns of the nut at fixed intervals, his movements being regulated by the relation of the scale on the milled nut to the

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<sup>1</sup> Philadelphia *Medical News*, Jan. 21, 1882.

<sup>2</sup> New York *Medical Record*, April 30, 1881.

**All after p. 6 lacking.**