
Unilateral Paralysis of the Lateral Crico-Arytaenoid Muscle.

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SUPPLEMENTAL REPORT ON
CARTILAGINOUS TUMORS OF THE LARYNX
AND WARTY GROWTHS IN THE NOSE.*

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At the meeting of the American Laryngological Association, held in Washington, September, 1888, I reported the case of a young man suffering from a cartilaginous tumor, just beneath the vocal cords, which grew from the lower portion of the thyreoid cartilage. This growth I had been treating by the local application of chromic acid in full strength.

At the time the growth seemed to have been practically cured, but the following month the patient again consulted me, when I found a slight thickening of the right half of the base of the tumor. I again cauterized the growth with chromic acid, and subsequently, on one or two occasions, similar applications were made, with the effect of completely destroying it. During the past year there has been no recurrence, and now the patient may fairly be pronounced cured. In this case the growth measured originally one centimetre in diameter by seven centimetres in thickness. Internal remedies and local applications of various kinds had done no good, and finally there seemed no way of removing it, excepting by laryngotomy, until I tried the plan of gradual destruction by chromic acid. Altogether twelve or thirteen applications of the acid were made, a mass of the fused acid about as large as a millet seed being used each time. Owing to the patient's business, intervals of from three weeks to several months intervened between the various cauterizations. At present the parts appear normal; even the mucous membrane shows no cicatrix, and the thickening has entirely disappeared. The acid seems to have caused absorption rather than destruction. Intense

* Read before the American Laryngological Association at its twelfth annual congress.
congestion followed each cauterization, but I never observed ulceration of the parts after the applications. However, I seldom saw the patient for several weeks after cauterization. From the final result in this case I can strongly urge a faithful and long-continued trial of this method of treatment in laryngeal growths which can not be thoroughly eradicated by forceps.

At the last meeting of this association I reported a case of warty growths in the nose which I had cauterized from time to time with chromic acid, nitric acid, nitrate of silver, or the galvano-cautery. I had hopes of curing the case by these agents, but the warts continued to return. For about two months after my report was written I either applied chromic acid or used the galvano-cautery about once a week for the destruction of all warty growths that appeared. On the 7th of August, 1889, I applied to the growth the tincture of thuja occidentalis and gave to the patient the same preparation, which he was directed to apply twice daily with a pledget of cotton, which was to remain for twenty minutes. At the same time he was told to take internally teaspoonful doses of the remedy three times each day. He made the local applications faithfully and for a few days took the medicine internally with considerable regularity, but afterward he limited the treatment to local applications. During the next ten weeks I saw the patient eight or ten times and made six or eight applications of chromic acid to small warts as they appeared. At the end of this time I find it noted in the record that there was no appearance of warty growths. The patient still used the thuja occidentalis locally, though not with great regularity. Subsequently the mucous membrane of that side had a tendency to become dry, for which it was treated from time to time with various remedies. About a month after the final disappearance of the warts the patient was given a spray of two grains of carbolic acid and two grains of camphor to the ounce of liquid albolene, which he used for a short time. It is now seven months since the last of the warty growths were destroyed and none have returned. What the influence of the thuja occidentalis has been upon this case it is impossible to say; but, from its time-honored reputation for curing warty growths and from the fact that previous remedies had failed, I think it fair to give it a portion of the credit, though doubtless the occasional use of chromic acid had something to do with the result; however, during the treatment it was very apparent that the growths did not reappear as quickly, and that they enlarged much more slowly after the thuja occidentalis had been in use a short time.
UNILATERAL PARALYSIS OF
THE LATERAL CRICO-ARYTÆNOID MUSCLE.
(LATERAL ADDUCTOR OF THE VOCAL CORD.)
PECULIAR CASES.*

BY E. FLETCHER INGALS, A. M., M. D.,
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ALTHOUGH bilateral paralysis of the adductors of the vocal cords is a common affection, unilateral paralysis is not often met with excepting as the result of compression or injury of the recurrent nerve, as, for example, in aneurysms of the aorta or malignant disease of the oesophagus. The affection is, however, met with in rare instances of lead and arsenical poisoning, and it is sometimes observed as the result of exposure to cold. It is sometimes attributed to rheumatism or phthisis, and is occasionally seen as the result of accident or surgical wounds. When accompanied by paralysis of the same side of the tongue or palate it is of centric origin. Two cases which I wish to report, although following shortly after surgical operations in the mouth and naso-pharynx, appear to be of hysterical character, though one would seem to prove that an injury to the terminal extremities of one branch of the eighth pair may, through reflex influences, produce paralysis of distant muscles supplied by an entirely different branch of the same nerve, and the other would appear to indicate that, in the same way, paralysis may be produced in one of the distant muscles supplied by the pneumogastric branch of the eighth pair, while the injury causing it occurred to the terminal loops of one of the branches of the fifth pair.

In these cases the usual dysphonia was present and the sounds produced by coughing or sneezing were more or less altered. In neither were there evidences of hysteria or symptoms indicating

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constitutional disease. There was neither swelling nor congestion of the larynx in either case, and in neither was there any evidence of injury to the recurrent nerve. The first patient recovered after a few weeks of, mainly, constitutional treatment; the second had been treated by another physician for over two months before coming to me, and has now been under my care for about four weeks without perceptible improvement.

Case I.—Miss M. P., aged twenty-two, school-teacher. This patient told me that two weeks previously she had some teeth extracted, which caused her to faint, and that twenty-four hours later the voice was suddenly lost so that she could only speak in a whisper, but her voice had considerably improved. When she consulted me she spoke in a coarse whisper and complained of slight pain at times in the left shoulder and back and of some difficulty in swallowing, which had been present since the voice was first lost. Otherwise she was in perfect health; the appetite was good and digestion normal. I found the voice of about one half its normal intensity. There was no difficulty in respiration and no cough except when attempting to swallow fluids. She was despondent for fear of being unable to return to her work, but there were no evidences of hysteria. There was evident paresis of the depressors of the epiglottis, as indicated by her difficulty in swallowing, though the condition was not discernible upon laryngoscopic examination.

Examination of the vocal cords showed absence of either congestion or swelling. On phonation, the left cord passed about three millimetres beyond the median line, but the right one remained motionless at the side of the larynx. At her first visit I applied a simple stimulating spray to the larynx and ordered pills containing iron and quinine with one twentieth of a grain of strychnine in each. At her second visit the same local application was made and the strychnine continued, though the other remedies were changed. A week later there had been no material improvement. The faradaic current was then applied to the cord itself by means of a double electrode. The internal remedies were continued. A few days later the faradaic current was again employed and the dose of strychnine was increased to one sixteenth of a grain. Four days later the same treatment was repeated. At her next visit (twenty days after she had first consulted me) it was noted that, although the right cord itself was motionless, the tissues covering the right arytenoid cartilage moved considerably on phonation. Three days later there had been slight, if any, improvement. The faradaic current was then discontinued, but the strychnine was increased to one twelfth of a grain three times daily. From this time on I made no local applications. About a week later, as the patient wished to return to her home in the country, I increased the dose of strychnine to one tenth of a grain and gave her in addition a grain and a half of quinine, a grain of the valerianate of zinc, and one
fortieth of a grain of nitrate of sanguinarine three times a day. She was allowed also to apply the faradise current over the larynx as suited her inclination. I heard nothing more from the patient for five weeks. During that time she had continued the treatment, and she then reported herself completely cured. There was no subsequent return of the dysphonia. Some months later I saw the patient and found that the paralysis had entirely disappeared.

Case II.—Miss L. B., aged nineteen. This patient came to me in the latter part of March on account of difficulty in speaking, which not only interfered with her ordinary voice but prevented singing. She stated that for a year and a half she had been troubled with catarrh, and that recently she had been under the treatment of another physician for this affection. He had found enlargement of Luschka's tonsil, which he had removed at two different operations. The first operation gave her much pain, but at the second operation cocaine was used more freely and there had been little or no suffering. Upon the day following the second operation she had been comfortable and had used her voice more than usual, but on arising the next morning—that is, two days after the operation—she found herself unable to speak louder than a whisper. This occurred eight weeks before the time she first consulted me. In the mean time her voice had gradually improved until at the time I saw her she could speak aloud in a husky tone, but she was unable to sing. During these two months she had been under the treatment of her physician, and had received several applications of the faradise current. Her general health was excellent and she had no cough or dyspnea.

I found the nares and naso-pharynx essentially normal, but there was some inflammation of the Eustachian tubes. Upon examination of the larynx, I found the right vocal cord completely abducted and immovable upon attempted phonation. There was no congestion or swelling of the parts. I applied the static current and recommended the internal use of strychnine, but she did not place herself under my care until nearly two weeks later. Upon her return, I applied to the Eustachian tubes and middle ear an oily solution of carbolic acid, gr. 1/2, and menthol, gr. v, in liquid alboline, 2 j. This was introduced through the naso-pharynx by means of my ordinary atomizer, with a long bent tip, the nostril being held while the spray was being thrown in. I applied to the larynx a slightly stimulating spray, mainly for its psychical effects, and used the static current externally over the larynx. Thereafter she took sulphate of strychnine in gradually increasing doses until she experienced a peculiar nervousness about twenty minutes after taking the medicine. This did not occur until the dose had reached one tenth of a grain three times daily. It was found that half this dose could be taken six times daily without inconvenience, therefore this method was adopted. The case is still under treatment. On phonation, the supra-arytenoid cartilages of the right side move a little, but the vocal cord remains motionless and the left cord nearly meets its fellow far to the right of the median line.
UNILATERAL PARALYSIS OF CRICO-ARY'TÆNOID MUSCLE.

The question has arisen in my mind whether this paralysis could have preceded her attack of aphonia, but everything in the history of the case seems to prove that it did not, and the most critical examination fails to detect any other than a hysterical origin, either centric or along the course of the pneumogastric or recurrent laryngeal nerve.

This patient was completely cured in four weeks after the foregoing was written, and there has been no recurrence.

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