

ACUTE LARYNGITIS OF SINGERS; ITS ABORTIVE TREATMENT.*

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Acute laryngitis may occur from traumatic or constitutional causes. Traumatic laryngitis is non bacterial. Constitutional laryngitis is either due to bacterial infection, or arises from altered innervation. From whichever cause, the acute laryngitis of singers or public speakers, is of especial interest to the laryngologist, who is generally expected to do nothing short of a miracle for the relief of his patient. Traumatic laryngitis may be illustrated as occurring after vomiting, singing with faulty method, spasm of the glottis, cough, strangulation, etc. We must differentiate between an extravasation and a severe congestion. The picture is familiar to most of us, that of the deep purple red color of one cord, the result of rupture of a blood vessel in the submucosa. I have on two occasions known a singer to become aphonic from such an extravasation, the result of vomiting previous to or during a performance. It has occurred in my office, after a patient had a spasm of the glottis, the result of a spray application inadvertantly inhaled, and once as the result of a violent attack of coughing. This condition has been called hemorrhagic infarction. It is unilateral. Never is this extreme blood red cord imitated by a congestion from any other cause. Aphonia from this condition is unaccompanied by pain and there is no lack of motility of the cords, a constant occurrence in acute laryngitis. Another phase of inflammation of the cords is a bilateral congestion due to bad attack in singing, as from the abuse of the *coup de glotte* of the French nomenclature. Here we find the free edges of the cords red and slightly swollen in the middle third, or the entire cord affected—the so-called soda water bottle cords. This occurs independent of redness of the surrounding tissues, the result of mechanical interference, as from forcing the voice, singing or speaking during bodily exhaustion, etc. The condition described may, if not arrested, become chronic and go on to the formation of singers nodules.

The most usual cases, however, of acute laryngeal inflammation which we are called upon to relieve, are of nervous origin, cases in which we observe a mal-co-ordination of the intrinsic muscles due to perverted inhibitory function, or paresis of the motor nerves.

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These cases are nearly always accompanied by a congestion of the larynx. It is hardly necessary to go into the subject of constitutional laryngitis other than to note the sudden extinction of voice due to colds, influenza and la grippe, and to refer to the laryngitis due to shock or grief. We might call attention to that which comes on very suddenly as the result of breathing hot vitiated air in a crowded reception. So many things cause laryngitis that it would take more time to elaborate the etiology than the demand on your patience would justify. I have observed a case in which a change of language from French to German caused a laryngitis with interstitial changes to occur after a single operatic representation, the typical singers nodules being well defined.

It is essential in estimating an acute affection of the larynx to observe the shape of the glottic chink. Adduction is brought about by the crico arytenoidei laterales, supplemented by the arytenoideus, and we know that if adduction is impossible both these muscles are affected; but if the cords approximate anteriorly and the triangular chink remains between the posterior thirds, then, only the arytenoideus is affected by a paresis, or paralysis, as the case may be. A unilateral adductor paralysis should at once lead us to a guarded prognosis. Always see if further adduction takes place in deep inspiration, viz.: find out by this if paralysis is complete. A bilateral adductor paralysis is generally functional in origin, due to hysteria or reflex causes, but in almost all the laryngeal inflammations we note a paresis of the adductors of slight degree.

If we on the contrary observe an abductor paresis, we have to do with an affection of the crico-arytenoidei postici muscles. This is frequently due to pressure on the recurrent nerves from enlarged bronchial glands or, disturbance of the vagus. This condition is often produced by a simple cold.

By far the most common of the pareses accompanying a laryngitis, especially among singers, is the paresis of the thyro-arytenoid internus and externus muscles. We are all so familiar with this picture of the elliptical chink of the glottis caused by a paresis of the internal thyro-arytenoid that I need not dwell upon the description. Two other pictures of less frequent occurrence deserve mention: one is where the cords, though they approximate, are deflected posteriorly to right or left, due to an adductor paresis of one cord and compensatory adduction of the other cord to meet it, the arytenoid apices slightly overlapping. The other condition to which I wish to call attention is the double ellipse, caused by combined paresis of the arytenoideus and the external thyro-arytenoidei muscles.

It is astonishing in voice users how invariably a slight paresis accompanies almost every acute affection of the larynx, which we are wont to call a laryngitis. On this account it did not seem that a brief review of the pictures were out of place in this sketch.

With this short summary of the etiology I will go on to state what may be expected from treatment. The patient almost always presents himself struggling to speak in a loud tone with a very husky voice. The *sine qua non* of treatment we must at once exact viz.: absolute silence, or a tone whispered upon the lips with no laryngeal quality in the voice. This must be enjoined until the sound, written *humph*, may be made without effort through the nose, the mouth being closed. Then we commence vocal exercises, using words like *ming, mong, ding, dong, maw, moro*, etc., as an adjunct to treatment; for at that moment we know the thyro-arytenoids and other affected muscles have lost their paresis, if it existed, and have regained their tonicity. The instant innervation is re-established, then we may commence muscular exercises to overcome the slight infiltration which is present. Internally from the first we exhibit strychnia, and apply static or faradic electricity along the course of the recurrent laryngeal nerves. Of greatest value in this stage is the use of adrenalin chloride solution sprayed into the larynx, before doing the tone exercises.

While we are carefully exercising the sluggish intrinsic muscles by using with the nasal attack, words beginning with the labial consonants, as exemplified by humming the word *ming*, it is well to alternate the work by giving a massage to either side of the trachea and thyroid as well as under the ramus and angle of the jaw. The latter is performed by standing in front of the patient, separating the first and second fingers, applying them over the region of the inferior maxillary glands and making rapid backward and forward movements, pressure being directed upward and inward. The trachea and laryngeal massage is done upward and downward with the thumb and two fingers. A cold pack is then applied to the throat and the pyriform sinuses are swabbed with tincture of iodine and glycerine in equal portions, to stimulate the nerves and produce a counter irritation without the vocal larynx. This method of procedure will quickly abort a commencing laryngitis. Of course attention must be paid to nutrition and elimination, and the respired air must be cool and pure. After a laryngitis has been relieved in this manner a spray of adrenalin (sol. 1-1000) diluted with four volumes of water, should be used during a performance, alternated with an inhalation of menthol in albolene (5 to 10 grs. to the

ounce), or an inhalation of iodoform in ether. I have saved many a performance by using this method and consider it the simplest and best.

There is quite a knack in knowing just when to begin the vocal exercises, for on them depends the rapid cure. If we allow nature to overcome the hyperæmia, by the process of diapedesis and resorption, we must admonish rest and patience. The treatment outlined above is only attempted when demanded by the special emergency of the individual case, but it is success in these emergencies which shows the master hand and lends most to our reputation.

Can Hypertrophic Rhinitis be Cured by Other Than Surgical Measures?—JACOB E. SCHADLE, St. Paul, Minn. *International Medical Magazine*. February, 1903.

After a very intelligent exposition of some of the chief symptoms and the pathological conditions characterizing this disease, the author immediately disposes of the question that furnishes the text of his paper, by answering with an emphatic "No." He says, "there is but one method by which hypertrophic rhinitis can be cured, and this is surgical intervention."

The different methods of surgical procedure are classified as; the acid caustic; the electro-cautery, and the radical method.

Of the acid caustics, the author holds that chromic acid is the remedy *par excellence*, but is pregnant with the best results when used only in the intumescent variety of chronic rhinitis.

For that variety of enlargement resulting in dense connective tissue alterations the electro-cautery is the remedy offered preferable to that of chromic acid.

A linear incision into the growth down to the periosteum of the bone is recommended. Nor more than one hypertrophy at a time should be operated. An interval of from two to four weeks should elapse between operations. A flat-bladed cautery should never be used.

The cold wire snare is the instrument offered as the best one for removing the papillary variety of hypertrophy and also in those cases of smooth hypertrophy not amenable to the electro-cautery.

The nasal scissors is mentioned as used by some operators. Both the hot wire snare and the spokeshave are spoken of only to be condemned.

STEIN.