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**THE LOCAL TREATMENT OF TUBERCLE OF THE
LARYNX AND ITS INDICATIONS.**

(Conclusions.)

By Dr. THEODOR HERYNG.

1. Tubercle of the larynx, or, rather, the laryngeal phthisis induced by it, can heal by itself, without any local treatment. Most frequently the ulcers heal on the vocal cords and posterior wall of the larynx. Very rarely the more serious cases with infiltration and proliferation products with deep ulcers, also affections extending to the cartilage, accompanied with aphonia and severe dysphagia, lead rapidly to disintegration and extension to the lungs.

2. Out of about three thousand cases of laryngeal phthisis which I have collected during the last eight years, I have observed spontaneous healing in fourteen. These were simple cases of slight laryngeal phthisis, without any affection of the epiglottis or the cartilages of Santorini. The ulcers were found most frequently either on the vocal cords or on the posterior wall of the larynx, less frequently on the false cords. These were healed by inhalations only, along with general and climatic treatment, without local interference. The healing process required in some cases three to eight years. The patients were nearly all about forty years of age. The lung affection was mostly of a fibrous nature, not extensive, more often confined to one side; the nourishment as well as strength and appetite were good. The majority of these patients belonged to the better class. The laryngeal affection was of a chronic nature. The treatment was begun in the very first stage of the disease and continued throughout. In

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these cases dysphagia was very slight; the hoarseness, however, was considerable.

3. Those cases in which the disease shows itself in the form of infiltration or tumour-like excrecences on the posterior wall of the larynx, which become chronic, and in which the epiglottis and cartilages of Santorini are little or not at all affected, give the best chances of recovery.

4. Relative results can be gained in many cases of chronic unilateral disease, with concurrent infiltrations which do not tend to break down, or with so-called tuberculous tumours of the true or false vocal cords.

5. Cases in which diffuse infiltrations of the larynx appear with rapid breaking down, deep ulcers on the epiglottis and the tumour of Morgagni which extend to the ventricle, necrosis of the arytenoid cartilages, showing symptoms of stenosis, and miliary tubercle: these give the worst prognosis.

6. The possibility of recovery depends first on the constitution and power of resistance of the patient, then on the anatomical character and extent of the lung affection, and further on the age and surroundings of the patient. The condition of the lung affection and of the nourishment of the patient indicate the issue.

7. Tumour-like infiltrations of the intra-arytenoid space lead to the formation of abscesses and general infection. These appear to be in many cases of primary origin, but more often they indicate a latent tuberculous condition of the lungs.

8. The chief indication in the treatment of tubercle of the larynx, which almost invariably is accompanied with tubercular disease of the lungs, is hygienic, dietetic, and climatic.

9. As in most cases of phthisis in the larynx severe dysphagia occurs, it follows that *the first and most important indication in the treatment to be considered is the removal of the dysphagia.*

10. *The second equally important indication touches the special cases in which the breathing becomes difficult, and symptoms of stenosis appear on account of tubercular infiltrations and proliferation products.*

11. The third indication has to do with the recovery of the impaired or lost voice.

12. In order to treat the dysphagia successfully we must endeavour to remove the causes. It is caused by:

(a) Tubercular infiltrations of the epiglottis, of the posterior wall of the larynx, of the lateral ligaments, and of the cartilages of Santorini.

(b) Tubercular ulcers arising from breaking down of the infiltrations and occupying the same position.

(c) Inflammatory processes, usually secondary, very often resulting in inflammation of the cartilage and necrosis.

13. The principle of general treatment of dysphagia must be based on resting the diseased organ—avoiding speaking and anything which stimulates the diseased mucosa.

14. The healing of deep ulcers of the larynx resting on inflammatory infiltrations, surrounded by proliferation products, and certain forms of

localized chronic laryngeal tubercle is effected quickest by scraping or rather *removal of the tubercular tissue*.

15. To these methods, the principles of which I published in 1887, I have to add now those of galvano-caustics and electrolysis.

16. Lactic acid is indicated in superficial circumscribed ulcers of a dirty character and covered with spongy granulations, situated on the vocal cords, the false cords, and posterior wall of the larynx; and in isolated superficial ulcers of the posterior surface of the epiglottis.

17. This remedy (lactic acid) is useless in most cases of large, hard and diffuse infiltrations.

18. The surgical treatment is indicated :

- (1) In tubercular tumours of the epiglottis ;
- (2) In circumscribed chronic tumour-like infiltrations of the posterior wall of the larynx, which show little inclination to break down ;
- (3) In chronic tumours resting on an inflammatory base, surrounded with proliferation products, *which resist all other methods of treatment*.
- (4) In partial disease of the larynx, even when the epiglottis, false cords and lateral ligaments are affected.

19. *Surgical treatment is contra-indicated :*

- (a) In advanced phthisis of the lungs with hectic and wasting ;
- (b) In diffuse miliary tubercle of the larynx, or rather of the larynx and pharynx ;
- (c) In all cachetic conditions ;
- (d) In severe stenosis of the larynx caused by inflammatory swelling of the affected parts. In these cases tracheotomy must be performed as soon as possible.
- (e) In patients exhibiting fear and nervous excitability, mistrust of a physician and who are always changing their doctor, *especially those whose condition promises little hope of recovery*.

20. The surgical treatment demands on the part of the physician the greatest sacrifice for the patient ; patience, great perseverance, thorough *knowledge of the operation*, and well made sharp instruments. *The operation must be done in the patient's home, or in the hospital*. The after treatment requires the greatest attention and the patients must be kept under observation for months, often years.

21. With the proper application of cocaine the operation itself is not painful. Submucous injection of cocaine is hardly ever necessary.

22. *It must be explained to the patients and their friends before the operation that the dysphagia cannot be removed at once by surgical interference, that it is very often increased for a few days and further that the operation does not effect a radical cure*. It is also advisable to tell the patients that the radical removal of the accessible parts is very seldom successful in one sitting, *that in spite of a successful operation the disease in the larynx may return, and that the physician can give no guarantee of ultimate restoration to health*.

23. The galvano-caustic treatment of hard tumours of the false cords

—of sclerotic infiltrations of the epiglottis and formation of granulation in the ventricles, is *often* of use. In patients who are afraid of the knife and who are patient enough, *the electrolytic treatment may be tried*. The physician must have a thorough knowledge of how to administer it and the batteries must be accurate and provided with a rheostat and galvanometer. The disadvantages of this are pain and the length of time of the operation. The advantages are avoidance of bleeding.

24. Pyoktanin (one to two per cent. solution) has proved a very good means of preventing inflammation in the parts operated on. It must be applied to the surface of the wound twice a day.

25. Serious bleeding after the operation is very rare. It can be readily stopped by the application of a mixture of lactic acid and liquid ferri sesquichlor. in equal parts.

26. A dissemination of the tubercle and increase of the lung affection after surgical interference has been observed in some cases. This result has been of extremely rare occurrence in the two hundred and seventy cases collected by me; but it may take place, particularly with those patients who, after the operation, neglect after treatment and expose themselves to injurious influences, such as taking cold, etc.

27. With proper after treatment the parts operated on heal in from three to six weeks.

28. *Nearly the whole of the upper part of the larynx* is accessible to surgical treatment by suitable instruments. It should be a rule in surgical treatment to excise as much of the affected parts as possible in one sitting. The double curette has the advantage over the single curette in certain cases.

29. Recurrence takes place frequently at the place operated on, sometimes at a little distance from it. It is explained *not only by the inaccessibility of certain parts of the larynx for our instruments*, but also by the imperfect performance of the operation. In most cases, however, the recurrence is due to the disease spreading to the lungs and the insufficient power of resistance to the infection.

30. The want of success in treating cases of laryngeal phthisis by surgical or therapeutic means is often due to the disease being recognized too late for treatment to be of any use.

31. Bad cases of laryngeal phthisis ought to be treated in climatic establishments set apart specially for consumption. It would be desirable that the physicians in such establishments should acquire the art of operative treatment *as long as we are unable to exercise other means which will take the place of the surgical treatment necessary in many cases*.

32. The power of absorption in severe tubercular infiltrations, as also the likelihood of healing of even extensive ulcerous processes of the larynx, with complete restoration of the voice, has been proved by anatomical and microscopical preparations as well as by long-continued clinical observation.