ON THE

ELEMENTS OF PROGNOSIS

—AND OF—

THERAPEUSIS

—IN—

TUBERCULOSIS OF THE LARYNX.

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ON THE ELEMENTS OF PROGNOSIS AND OF THERAPEUSIS IN TUBERCULOSIS OF THE LARYNX.

While acknowledging the stern truth that the prognosis is always bad in tuberculosis of the larynx, it may be maintained that the prognosis is less unfavorable in certain groups of cases than in others; and that systematic therapeutic measures are capable of doing much more good in such cases than is generally admitted, even to the establishment of reparative processes in occasional instances.

A case mentioned in the edition of 1879 of a treatise by myself on Diseases of the Throat and Nasal Passages, as having lived more than eight years after the re-establishment of comparative health, is still alive and doing well; and several others that have been under my observation have recovered so far as to resume their occupations, and maintain a tolerable degree of health, and of enjoyment of their impaired lives.

The proportion of such recoveries is exceedingly small, less than one per centum; but the very fact of occasional recovery under treatment affords sufficient satisfaction to indulge the anticipation of considerable increase, as the elements of prognosis are more accurately ascertained and the institution of appropriate remedial agencies more thoroughly determined.

The probable hold upon existence, in cases of tuberculosis of the larynx, or the period to which the probable death of the patient may be protracted, are

important subjects to the domestic circle in any individual instance; and any investigation is valuable which may throw light upon this important point in prognosis.

In collating the cases which have occurred in my own practice, I am appreciating the fact that there are certain objective indications, which, studied out and compared with future observations to the same purport, will aid us in estimating the length of days remaining at the disposal of the sufferer, and in prolonging the remnant of his existence by judicious therapeutic measures.

Acute tuberculosis of the larynx is almost certain to terminate fatally at a period varying from six weeks to six months. Some cases terminate still more rapidly, others linger a few weeks or months longer. Recovery is so rare that the accuracy of diagnosis may be fairly questioned in the few instances on record; especially in the face of the fact that the aspect of the disease and its immediate ravages bear very close physical similitude to the progress of acute latent, and tertiary syphilis. So close is this resemblance in many instances, that the test of anti-syphilitic medication must be applied before a positive opinion can be pronounced as to the tuberculous or syphilitic character of the case.

Previous to the discrimination of acute tuberculosis of the larynx these cases were regarded as syphilitic, and the failures to cure it were attributed to the profound dyscrasia under which the patient labored.

Hence the comparatively recent addition to nomenclature of acute tuberculosis of the larynx. Acute tuberculosis of the larynx is usually indicated by acute laryngitis following exposure to cold and wet, in which deglutition first becomes difficult and subsequently very painful. Intense pain in swallowing is often the only marked characteristic subjective symptom. Swelling of the epiglottis, with progressive ulceration from one or both sides, as revealed by laryngoscopic inspection, account both for the difficulty and pain in deglutition. Pulmonary symptoms of tuberculosis are evident on careful physical exploration of the chest, and serve to confirm the diagnosis of the disease, which steadily progresses as acute tuberculosis, and terminates fatally, as has been mentioned, at a period extending from six weeks to six months; secondary tuberculosis having taken place meanwhile in other organs adjacent and at a distance.

Painful deglutition, therefore, supervening upon an attack of acute laryngitis, and due to tumefaction and ulceration of the epiglottis, and of the fold of tissue uniting the epiglottis to the pharynx, is indicative of acute tuberculosis, with rapidly fatal termination.

The local use of morphia by insufflation, or of morphia and iodoform in powder, presents the most efficient means available of diminishing the pain on deglutition. Before the sedative powder is blown upon the parts they should be thoroughly cleansed by an alkaline douche or spray, to enable the medicinal agent to be applied to the diseased surface, in-

stead of being merely commingled with the secretions which cover it. The solution used most frequently for this purpose in my own practice, consists of five grains of borate of sodium, one drachm of glycerine, and seven drachms of tar water.

Far more frequent than acute tuberculosis of the larynx is the chronic form of the disease, of which we may differentiate several varieties of progressively protracted duration.

The shortest of these varieties becomes engrafted, so to speak, upon that variety of pulmonary tuberculosis characterized by rapid caseation of the pneumonitic foci. It occurs early in the malady, coincidently, perhaps, with the giving way of the pulmonary tissue, and runs its course to a fatal termination in from six to eighteen months.

It may be regarded as a sub-acute tuberculosis of the larynx, or as florid chronic tuberculosis. It is a secondary tuberculosis in the true sense of the term, although the subjective and objective laryngeal symptoms may precede those of the lung disease.

It is indicated by congestive catarrhal laryngitis, associated with localized or catarrhal pneumonitis, and followed by multiple minute ulcerations of the laryngeal mucous membrane. These ulcerations take place most frequently upon the posterior or lower face of the upper or free portion of the epiglottis, but they occur upon other localities also. These ulcerations extend in depth and in periphery, and coalesce when contiguous. Intumescence of the epi-

glottis gradually supervenes, followed frequently by intumescence of the ventricular bands and of the vocal bands. Similar intumescence takes place, but less frequently, in the inter-arytenoidal and arytenoepiglottic folds. The breathing space is often so seriously encroached upon by these tumefactions, that considerable dyspnœa ensues.

Meanwhile existing ulcerations extend, and new ulcerations occur and extend likewise, until in some instances the internal surface of the larynx is almost surrounded by irregular zones of tissue losses, rendering its aspect exceedingly ragged. Fungous granulations rise above the surface of some of these ulcerations, in many cases still further impeding respiration, and interfering with expectoration of the various products of hypersecretion and ulceration. The destructions of tissue, tuberculous and suppurative continue progressively throughout, involving all the component structures including cartilage, portions of which become detached, and become partially expectorated in detritus, fragments, or in masses. The destruction of the epiglottis takes place from above downward as the rule, but occasionally laterally, as in the acute variety proper. Secondary tuberculosis takes place in other organs, adjacent and at a distance.

The differential indication of this form of tuberculosis, in which the tenure of life may be estimated at from six to eighteen months, according to the activity of the process, and the existing pulmonary com-

plication, is to be recognized by the initial multiple minute ulcerations upon the epiglottis, particularly, in the early stages, and the subsequent tumefactions at the anterior portion of the larynx, followed by progressive extensive ulcerations, tuberculous and suppurative. Ulceration limited to the epiglottis indicates much more rapid progress to the fatal issue. Impairment of voice, dyspnœa, and later in the case dysphagia and painful deglutition, are the most characteristic subjective local symptoms.

Much more relief can be afforded by treatment in these cases than in the acute variety previously described. The constitutional treatment required is that adapted to tuberculosis of the lungs, irrespective of the laryngeal complication. Locally, much can be done to afford comfort by keeping the parts as cleansed as possible from products of secretion and ulceration, by alkaline sprays propelled upon the parts at regular intervals. For this purpose the solution of borax in tar water, previously mentioned, may be employed by the patient several times a day, a few drops of the sedative solution of opium being added to relieve pain and repress cough. Inhalations of terebinthinates, creosote or carbolic acid, in spray or in vapor, to follow the cleansing process, are beneficial both for antiseptic and for astringent and slightly stimulating purposes. Insufflations of powdered iodoform propelled directly upon the parts after previous cleansing, are grateful and soothing. The disagreeable odor of iodoform can be tolerably well masked

by the addition of a minim of attar of rose to the drachm, or five or more minims of essence of rose geranium.

Harrassing cough from the local irritation of the ragged mucous membrane and the secretions adhering to it, can be much diminished by wearing a light respirator of perforated zinc, or of buckram, or some similar contrivance, in front of which a small fragment of sponge can be confined, upon which five or more minims of terebene, oil of turpentine, creasote, carbolic acid, or eucalyptol may be dropped from time to time, as it evaporates, with the occasional addition of a rather smaller amount of chloroform.

In the earlier stages of dysphagia the preliminary deglutition of a teaspoonful of sweet oil often facilitates the immediate deglutition of nourishment, by coating the parts with protective fluid and by lessening the friction. When extensive ulceration prevents this relief, the best reliance is upon morphia, as in the acute variety.

The more chronic varieties of laryngeal tuberculosis occur in the more torpid cases of pulmonary tuberculosis beginning in localized pneumonias. The larynx does not become involved until the disease has considerably advanced in the lung, and softening is imminent, or is already in progress. These cases last from two to four years on the average, and sometimes much longer.

Pallor of the mucous membrane is perhaps the earliest marked characteristic of this variety. The

participation of the larynx is passive, so to speak, rather than active, and the tuberculous process is much slower in its manifestation and its progress.

Little by little the component structures of the borders and interior of the larynx lose their marked outlines and become more and more tumid. The sharp edges of the aryteno-epiglottic folds and other tissues become thickened and rounded off; while circumscribed tumefactions of much more marked character take place at different points literally supplied with normal lymphoid cells.

The supra-arytenoid cartilages and the aryteno-epiglottic folds undergo this tumefaction much more frequently than any other tissue. The epiglottis and the interarytenoid fold are two other prominent points for the process.

The sharp and peculiar outlines of the supra-arytenoid cartilages become transformed into characteristic globose tumors tapering off pear-shaped-like into the aryteno-epiglottic folds, with gradual obliteration of all the lines of demarcation between the folds and the contained cartilages; a transformation so characteristic as to be almost sufficient in itself to indicate pulmonary tuberculosis, aside from investigation of the chest.

In the inter-arytenoid fold a tumid projection gradually develops, sometimes condylomatous, more rarely acuminated, which prevents approximation of the posterior portions of the vocal bands, and thus entails aphonia or great impairment of voice.

The epiglottis increases in thickness to several times its normal dimensions, fails to occlude the larynx in deglutition and incites great care in swallowing, lest particles enter the air-tube.

The tumefaction in the epiglottis and arytenoepiglottic folds is sometimes increased by collateral œdema, which may be so great as to produce veritable stenosis, threatening asphyxia.

These cases are slow in progress as a rule, unless the patient be the subject of marked cachexia, when the destructive process may ensue as rapidly as in the slower cases of the subacute variety. The tumefactions may remain the only visible objective indications during the entire malady, but in advanced stages ulcerations are liable to ensue as in the other varieties, and not only at the points mentioned but in other parts of the structures.

Pallor of the mucous membrane of the larynx of a phthisical subject, followed by the circumscribed tumefactions just alluded to, form the chief indications of the slower variety of tuberculosis of the larynx in which the prognosis of a more prolonged existence may be given.

The tardy progress of the morbid process affords better opportunity for beneficial results from therapeutic measures; and their judicious selection at an early period in the disease may not only prolong the life of the patient, but even start him on the road to recovery.

The pallor of the mucous membrane of the larynx,

evident as it often is before anæmia is recognized elsewhere, indicates the advisability of the administration of meat as food and iron as medicine. A meat diet requires more or less exercise in the open air, or its substitute. Inhalations of compressed air by some of the methods now in vogue, massage of the limbs, and similar methods promote oxidation of the products of meat digestion, and thus invigorate the patient. Enrichment of the blood by the meat may be supplemented by the administration of iron. Tincture of the chloride of iron in ten minim doses, with fifteen minims of dilute phosphoric acid and a teaspoonful of the best syrup of the hypophosphites, preferably of lime in most cases, if that is at his command, is the prescription most relied upon by myself, given after meals in a tablespoonful of water.

The tumefactions are well painted every two or three days with equal parts of the compound solution of iodine and glycerine, or with a few drops of solution of iodine and of carbolic acid to the ounce, and the parts kept free as possible from secretory products by the alkaline spray already mentioned.

When ulceration takes place, antiseptics are added to the treatment locally and by inhalation.

Compressed air, alkaline sprays, iodine locally, iron internally, animal diet, and as free exposure to the air as practicable, constitute the therapeutic measures which have been followed by the best results in my own hands; and by these means modified or supplemented, as occasion may indicate, with such gen-

eral measures, hygienic and remedial, as are indicated from time to time, I have reason to believe that the course of certain forms of tuberculosis of the larynx may be retarded in occasional instances to such an extent as to give the patient a chance to recover.