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a Clinical Standpoint.

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PRIMARY AND SECONDARY  
PHARYNGEAL TUBERCULOSIS  
FROM A CLINICAL STANDPOINT.\*

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IT is not my intention this evening to discuss the ætiology or pathology of the subject of this paper, but simply to present some clinical facts as they have appeared to me.

For some years past various observers have stated the belief that pharyngeal tuberculosis was occasionally primary. Isambert, in 1875, described different forms of this affection, some of which he thought must be primary. Fränkel, a year later, said that although unable to prove it he certainly believed that one of his cases was primary. Within the past three years, Dieulafoy, Lermoyez, and others have published the results of their investigations and expressed the opinion that, under certain conditions, a tuberculous manifestation resembling in appearance adenoid tissue may occur in the naso-

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pharynx and pharynx. This has been my experience, and I have the pleasure of presenting to this meeting the history of a patient, which, I think, proves definitely the possibility of a primary tubercular infection through the pharynx and nasopharynx.

I also present the history of two cases of secondary pharyngeal tuberculosis.

The water colors which I will pass around, and the clinical facts of the cases, show clearly the difference between a primary and a secondary infection.

CASE I.—J. W., a man, aged twenty-four years; came under my care in April, 1895, suffering from acute laryngeal tuberculosis in an advanced stage, and extensive pulmonary involvement. The disease progressed

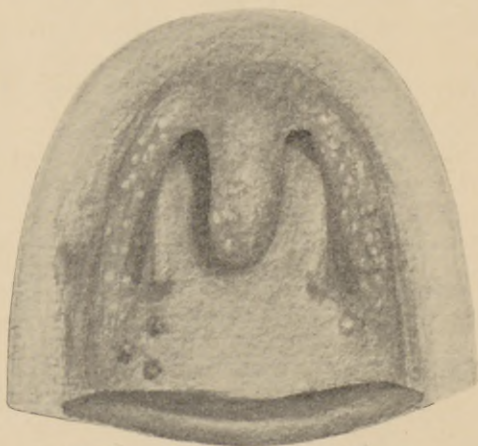


FIG. 1.—Secondary pharyngeal tuberculosis.

rapidly, and early in June the right posterior pharyngeal pillar began to thicken at its lower part, and the infiltration gradually increased until the soft palate,



uvula, and left post-pharyngeal pillar were involved. The invasion of the soft palate proceeded from the right side. On the tenth day from the first apparent invasion of the pharynx numerous yellow spots appeared on the right post-pharyngeal pillar; and on the twelfth day the pharynx presented the appearance shown in Fig. 1. The mucous membrane had previously presented a pearly gray, tense appearance, but within forty-eight hours its yellow spots resembled those seen in a case of follicular amygdalitis. At first the spots had a thin covering of epithelium, but in a few hours this broke down and bright yellow, curdy secretions dotted the surface. These were readily brushed off, leaving extremely small openings plugged with the same curdy-looking secretion. The uvula had been very œdematous prior to the appearance of the yellow spots, but as soon as they began to discharge the swelling subsided and gave the mucous membrane a wrinkled appearance. The minute spots of ulceration soon coalesced and poured out quantities of thick, tenacious secretion.

The disease then followed the usual course of acute cases, making deep, irregular excavations in the soft palate.

The patient died late in July, surviving about six weeks after the pharynx was attacked.

CASE II.—M. H., aged twenty-five years; came under my observation in June, 1895. He had a large tuberculous ulcer, extending from near the anterior commissure of the larynx upward over the left side of the cushion of the epiglottis, with considerable superficial infiltration of the arytenoid cartilages and epiglottis. He remained under treatment for about four months, and although placed under the most favorable climatic and hygienic surroundings, and receiving every approved method of treatment for this affection, nothing seemed to arrest the progress of the disease.

Four weeks before his death the lower part of the right lateral pharyngeal fold began to enlarge slowly and assumed a shiny appearance. This condition grad-

ually spread upward behind the posterior pillar until the infiltration presented a smooth, tense, ridgelike appearance. The right posterior pillar then began to thicken, similarly to the lateral fold, and the infiltration spread to the soft palate, and eventually to the uvula. By this time small yellow spots appeared over the seat of the first infiltration. These gradually spread upward on the lateral fold and posterior pharyngeal pillar, and subsequently broke down, forming small disseminated ulcers, which coalesced and followed a course similar to that described in Case I.

The left posterior pillar did not become infected, all of the infiltration having been on the right side.

Death occurred within five months of my first seeing him.

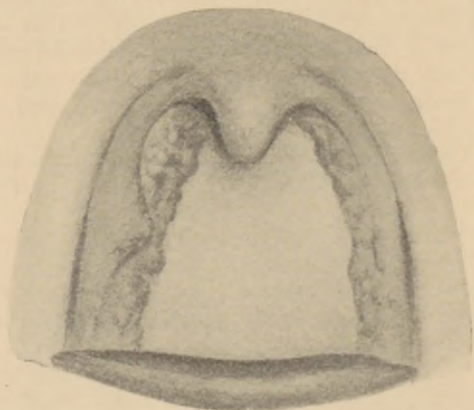


FIG 2.—Primary pharyngeal tuberculosis.

CASE III.—Maggie A., aged nineteen years; came to my clinic at the hospital early in September, 1895, complaining of considerable post-nasal discharge, stoppage of the nose, and discharge from the right ear. An examination showed some acute swelling of the pharyngeal tonsil, with more or less mucous discharge. The pharynx, soft palate, uvula, and tonsils appeared healthy.

Soothing applications were prescribed, and a few days later the post-nasal discharge had greatly diminished.

At several sittings, extending over a period of ten days, the adenoid tissue in the pharynx was removed with forceps under ordinary antiseptic precautions.

About a week after the last tissue was removed the patient returned to the hospital complaining of having chills and some pain behind the palate. She looked ill and was of an ashy-gray appearance.

A post-rhinoscopic examination revealed the mucous membrane in a semi-inflamed condition, irregular and puffy in appearance, and somewhat resembling adenoid growths. Several of these masses were removed, and were so firm and hard that it caused considerable comment. The patient felt relieved after this operation, and did not appear again for three weeks, when she returned, having considerable swelling of the cervical glands of two days' duration. The enlarged glands were very painful and tender on pressure, especially on the right side. The lateral folds of the pharynx, especially the right side, were enlarged, and appeared as thick, nodular ridges of about the size of an ordinary lead pencil, and passed upward behind the soft palate, and joined a number of similar nodular-looking masses in the nasopharynx.

The lateral pharyngeal folds are shown in Plate II, and resemble an accumulation of large granules or irregular masses, tender and hard to the touch, and of a deep bluish color. The same condition and appearance existed in the nasopharynx. The uvula at this time looked healthy, but the mucous membrane of the pharynx had a bluish appearance, though not infiltrated.

The patient looked and felt ill, and had a temperature of 101° F. A careful examination of the lungs revealed nothing of importance, and there were no other symptoms pointing to any pulmonary involvement. An unusual condition was recognized, and after considerable questioning tubercular infection was diagnosticated.

The questions brought out the following history:

The patient had always enjoyed good health until the



present illness. For some months prior to her first visit to the hospital she had been the sole attendant on a sister suffering from a somewhat acute form of pulmonary tuberculosis. She had taken no care to prevent herself from becoming infected, and when her sister died, in July, 1895, the patient moved into the bedroom occupied by her sister, and used the same bed clothing and other things belonging to her sister, without disinfecting them.

Examination of mucus from pharynx and nasopharynx showed it to contain tubercle bacilli. Several pieces of tissue were cut from the right lateral pharyngeal fold, and also from the nasopharynx, and submitted to Dr. Jonathan Wright, the pathologist of the hospital, for examination.

I am indebted to Dr. Wright for his careful examination and interest in the case. He has supplied the slide I am able to show you, and the following report:

DR. WRIGHT'S REPORT.—The specimen received from Dr. Chappell was a piece of tissue about ten millimetres in its long diameter and five millimetres in its short.

Half of this was sent to Dr. W. H. Park, who inoculated two guinea-pigs with it. Dr. Park reports that one of the guinea-pigs died in twenty-one days of septicæmia, and showed, in addition to this, typical tubercle in the spleen and other organs, the tubercles containing bacilli.

Four months later, the second guinea pig, which had presented signs of disease, was killed, and found to be suffering from disseminated tuberculosis.

The other half of the specimen was put in absolute alcohol, then in alcohol and ether, and imbedded in celloidin. Sections examined under a low power show a lymphoid tissue crowded with tubercle, presenting the picture shown in the drawing (Plate III).

Examined with higher power, the characteristic structure of tubercle, with many giant cells, may be seen, the areas of coagulation necrosis being shown as light spots in the drawing.



Sections were stained for tubercle bacilli. A few were found in two or three sections out of about forty examined.

The bacilli were never more than one to a tubercle granulum, situated usually in the centre of it, and sometimes in a giant cell.

DIAGNOSIS.—Miliary tubercle of lymphoid tissue.

The subsequent history of the case proves the correctness of this diagnosis.

Injections of creosote and lactic acid, also curetting, were thoroughly employed, with little benefit to the right side, but the left pharyngeal fold was considerably improved. Most of the fringed processes on the latter side disappeared, and the cervical glands diminished considerably.

During the latter part of January the right tonsil and the right pillars of the fauces thickened, grew œdematous, and assumed a light blue color. This condition spread upward to the soft palate and downward to the right side of the tongue. A small papillary-looking mass also appeared about this time in the interarytænoid space.

Almost daily examinations of the lungs had been made, by myself and others, from the time the infection of the pharynx was recognized. It was not until over four months from this date that any pulmonary lesion was discovered. This was first noticed in the right apex, and three days later in the left apex.

As soon as the disease invaded the lung tissue the case became one of acute pharyngeal, laryngeal, and pulmonary tuberculosis. The soft palate and pillars on the right, which had previously been simply thickened and somewhat swollen, became very tense and of a deeper blue color. On the right anterior pillar, small, curdy-looking secretions appeared and spread on to the tonsil, and subsequently extremely small, shallow ulcers developed, much different in appearance, however, from those in the two cases I have just reported. The mucous glands on the posterior third of the tongue enlarged enormously, and hung over the epiglottis. These masses were

round, of a grayish-blue color, and resembled clusters of polypoid tissue.

The two specimens I pass around were taken from this region.

Lastly, the arytenoid cartilages and the mucous glands in the posterior commissure became puffy, making respiration quite difficult. At no time were the ventricular bands, vocal cords, or any other parts of the larynx implicated.

The final stage was reached about the middle of March, when all the infiltrated tissue began to break down into small, superficial ulcers, as already described. The pulmonary disease had also progressed with remarkable activity, and the patient succumbed during the last week of March.

From her past history, M. A. evidently had some post-nasal catarrh for several years, with some enlargement of the pharyngeal tonsil. Although the removal of the latter was done with every antiseptic precaution, there was an early recurrence of tissue, which, from microscopic examination and clinical history, was undoubtedly tubercular in character. A number of tubercle bacilli were discovered in mucus taken from various parts of the nasal fossæ when the diagnosis was made, and undoubtedly they were inhaled while she was nursing her sister or occupying the room in which she had died.

The possibility that no infection would have occurred if the operation had not been done, is very interesting. The first appearance of an infection in the nasopharynx, and the subsequent descent along the lateral pharyngeal folds to the root of the tongue, and later into the larynx and lungs, point conclusively to the initial seat of the primary infection. The later invasion of the soft palate and uvula resembled in appearance and history cases of secondary pharyngeal infections.

The water colors and clinical histories of these cases show differences between a primary and a secondary infection. In the former there is a proliferation of tissue

at the seat of invasion, and evidence of an inflammatory process, with considerable stasis in the local circulation. At no subsequent period did this tissue break down or go through the process of ulceration observed in other infiltrations which were secondary in character.

In all the secondary cases seen by me, the infection was in the form of a general infiltration of the mucous membrane, which soon progressed to ulceration and destruction of all infected tissue.

In the primary case the local evidences of an infection of the pharynx and nasopharynx preceded the sympathetic swelling of the cervical glands by about four days, thus following the rule of other primary infections, such as syphilis and cancer, in which we have an early implication of the glands in the neighborhood of the infection.

Furthermore, the cervical glands in the primary case swelled quickly, had considerable inflammation and infiltration, and were very painful and tender, all pointing to an acute infection from a part in the immediate neighborhood.

In my own secondary cases, and also in some others observed by me, the cervical glands were enlarged some time before any pharyngeal invasions. In one case this was very noticeable. The deep cervical glands from the clavicle to the angle of the jaw on the right side gradually enlarged from below upward, and subsequently a few on the left side became affected. They were never very tender, nor did they show evidence of an acute infection; but eventually a pharyngeal deposit of tubercle appeared.

In studying the histories of reported cases of pharyngeal tuberculosis, several observers mention the presence



of a fringe of small excrescences extending along the posterior pillars of the pharynx and into the nasopharynx. This condition corresponds so closely with the writer's primary case that it seems very presumable that they also were primary.

Another interesting clinical fact in both forms of the disease is, that the right side of the pharynx usually is the first to show the tuberculous invasion.

In all of my secondary cases the infiltration began first in the right pharyngeal fold, passed on to the right posterior pillar, and thence to the right side of the soft palate.

In my primary case the infection was much more severe on the right side, and spread up the right side of the pharynx to the soft palate and reached the tongue and larynx, seemingly, entirely through the right side.

Furthermore, in nearly every case reported fully by other writers, mention is made of the right side of the pharynx being more severely infected than the left. This is undoubtedly due to the difference in the arrangement and distribution of the lymphatics on the right from those on the left side of the neck.







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FRANK P. FOSTER, M.D.

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