XVIII.

ACUTE LACUNAR INFLAMMATION OF THE TONSILS.*

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The essential morbid lesion in acute lacunar tonsillitis is a catarrhal inflammation affecting chiefly the lacunae or crypts of the tonsils. The process may be limited to a few crypts in one or both tonsils, or the entire lymphatic tissue in the pharynx may be involved. It occurs rarely as a primary disease, and is usually associated with a general catarrhal inflammation of the tonsils and naso-pharyngeal structures, which doubtless acts as the chief predisposing cause of the tonsillitis.

Its infectious nature is no longer in doubt, and the intensity of the disease varies according to the form of infection, its location, and the natural resistance of the patient. This will account for the comparatively mild systemic disturbance in some cases, and the profound toxemia in others. So far, no one has yet been able to isolate the specific micro-organism upon which it depends. Viellon¹ believed it to be due to the streptococcus pyogenes, which he found present in all of the twenty-four cases which he examined.

Meyer,² in the analysis of 53 cases, found staphylococci in 14, streptococci in 15, and a mixture of staphylococci and streptococci in the remaining 24 cases. He found

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also a diplococcus closely resembling that of pneumonia. Tubercle bacilli and Klebs-Loeffler bacilli have been found occasionally in the bacteriologic examinations of acute lacunar inflammation of the tonsils. Their presence is believed to be merely an accidental occurrence. It must be remembered that a great variety of pathogenic bacteria have been found to exist in the throats of perfectly healthy individuals. This, doubtless, can be explained by the normal tissue resistance, or what is commonly known as phagocytosis. The natural inference, therefore, would be that these organisms are of secondary importance as etiologic factors in diseases, the chief predisposing cause being some inflammatory process, which first weakens the physiologic resistance of the mucous membrane.

This may be sudden exposure to cold, lesions of adjacent structures or a lowered general vitality of the individual due to some constitutional dyscrasia or toxic material circulating in the blood.

Intra-nasal and pharyngeal operations are frequently associated with acute lacunar tonsillitis. Their etiologic relation is of considerable interest and importance to every nose and throat specialist. No matter how carefully these operations may be performed, or what precautionary measures may be taken in the after treatment, a certain proportion of the cases will be followed by acute lacunar inflammation. Granting that ordinary antiseptic precautions have been taken, this may be explained by:

I. The open wound acting as an accessible point of entrance for the bacterial infection, the poison being conveyed to the tonsils through the neighboring lymphatics.

II. Certain pathologic changes in the naso-pharyngeal structures due to the irritating effects of plugs or dressings within the nose.

III. The local and constitutional effects of the cocaine, which weakens the natural resistance of the patient.

Chronic enlargement of the tonsils naturally invites recurring attacks of inflammation. This is especially true if the tonsils are undergoing what is commonly described as follicular degeneration. The retained secretion decomposes, distends the lacunae, weakens the lining membrane by interfering with its blood supply, thereby furnishing

the chief requisite condition for bacterial infection. Ulceration and necrosis may occur at any point within the lacunae, and give rise to a parenchymatous tonsillitis.

Much has been said and written on the tonsils as portals of entrance for pathogenic bacteria. There can be little doubt that many of the acute infectious diseases owe their origin to micro-organisms, introduced into the system through the tonsillar crypts. They are favorite breeding places, veritable incubators for all kinds of bacteria, particularly the staphylococci and streptococci. The protective epithelium within the crypt once denuded, nothing is to prevent these organisms from entering the lymphatic and circulatory system. This will account for the frequent association of acute lacunar tonsillitis and rheumatism, endocarditis, myocarditis, nephritis, and many other infectious diseases. It is a mistaken idea to suppose that they have any other relation than a common bacterial one. The first effect of the micro-organisms is manifested on the tonsils, and to their systemic absorption through the tonsillar crypts, the rheumatic and other infectious processes so frequently associated owe their origin.

Wagner,³ of San Francisco, has been able to demonstrate in the urine and synovial fluids of patients affected with rheumatism and tonsillitis, the same identical micro-organisms. The theory of the microbic origin of rheumatic fever is to-day pretty generally conceded, as may be seen by MacLagan's⁴ article on "Rheumatism" in the Twentieth Century Practice of Medicine; also, the recently published report of a discussion⁵ on rheumatic fever at the annual meeting of the British Medical Association.

Acute lacunar tonsillitis occurs most frequently between early life and adolescence. This is explained by the abnormal development of the lymphatic tissues during this period of life. While the faucial tonsils are most likely to be affected, the disease is by no means confined to these structures. Any portion of the so-called tonsillar ring may show numerous white pultaceous masses, marking the lacunae or crypts concerned in the process. This is especially true of the lymphatic or adenoid tissue in the vault of the pharynx, often the only part affected, and escaping our notice, unless a post-rhinoscopic examination be made. Ordinarily the diagnosis can be made by

direct inspection, but not always so. While the anatomic appearances are quite characteristic, a bacteriologic examination should always be made to ascertain, if possible, the presence of a mixed infection, which not infrequently occurs.

Is acute lacunar inflammation of the tonsils contagious? To a moderate degree, yes. Abundant clinical evidence can be produced in support of this theory. We not infrequently find it epidemic, running through whole families, besides affording abundant proof in other instances of direct communication from person to person from a single exposure. Being distinctly a microbic disease, all that is required to make it contagious is exposure, and the necessary receptive condition of the patient.

It is needless, here, to do more than simply mention the cervical-lymphatic and ear complications of this affection. The extent of destruction done to these structures will depend largely upon the specific organism concerned in the process—the streptococcus naturally being the more destructive in its results, and most likely to be followed by suppuration.

The treatment of acute lacunar inflammation of the tonsils is both local and constitutional. Much confidence is expressed by some physicians in their ability to abort this affection. Personally, I cannot lay claim to any such superior skill. I wish I could. The remedy which is supposed to possess such magic power is the local application of guaiacol. It has some antipyretic and antiseptic properties, and is also a local anesthetic to a slight degree. This is all, I think, that can be justly claimed for it. I cannot recall a single instance wherein I have been able to successfully abort an attack of acute lacunar tonsillitis. As well might we claim to abort typhoid fever, diphtheria, or any other of the infectious diseases. All we can hope to do, by local treatment, is to modify the severity of the disease, as it is self limited, lasting at most but a few days. If the lacunae or crypts are distended with confined secretion, they should be evacuated by a blunt-probe-curet, care being taken not to denude the epithelium more than is possible.

The indiscriminate local treatment of the crypts, digging and probing in the vain hope of dislodging or de-

stroying the poison supposed to be lurking therein, is, I dare say, productive of more harm than good. As a routine treatment, I have been in the habit of using the following combination:

R. Acid carbolic.....gtt x
 Acid boracic.....
 Soda biborate.....aa ʒiss
 Hydrogen dioxid.....
 Borolyptolaa ʒi
 Aquae dest.....q.s. ad fʒviii

M. Sig. Use as a spray or gargle every two hours.

Small particles of cracked ice, or ice-water in the form of a spray or gargle, is of decided benefit in the early stage of the disease. If there be indications of any extensive lymphatic involvement, the ice-coil may be used.

The constitutional treatment consists in free purgation with calomel or effervescing phosphate of soda. For the fever, headache and muscular pain, I usually combine codein sulphate, salol and phenacetin, in proportions to suit the age and requirements of the case. If there is a previous history of rheumatism, I rely on the salicylate of strontium or soda in preference to the salol.

The tincture of chlorid of iron is a time honored remedy, the value of which cannot be over-estimated in this affection. It has a decidedly beneficial local effect, besides a selective action on the blood and kidneys. It should be given during the acute stage of the disease and continued far into the convalescence.

As one attack of acute lacunar tonsillitis predisposes the patient to recurrent attacks, it goes without saying that these offending and apparently useless organs, the tonsils, should be removed without delay during the quiescent stage. Under no circumstances should any operative procedure be employed during the active period of the disease.

REFERENCES.

- ¹Archives de Medecine Experimentale, etc., Paris, March, 1894.
- ²American Text Book of Diseases of the Eye, Ear, Nose and Throat, 1899, p. 923.
- ³Trans. American Laryngological Association, 1894, vol. XVI., p. 141.
- ⁴Twentieth Century Practice of Medicine, 1895, vol. II., p. 189.
- ⁵Journal of British Medical Association, 1896, vol. I., p. 65.

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