VISCERAL SYPHILIS

SYPHILIS OF THE SPLEEN *

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SYPHILIS OF THE SPLEEN

Syphilis of the spleen, giving rise to symptoms, which is an exceedingly common finding in syphilis of the new-born, and a not infrequent pathologic finding in recent syphilis, is thought to be relatively rare in acquired syphilis. It is far more frequent in the earlier stages of the infection, occurring coincident with the general lymphadenitis, than as the later or tertiary form. The relative insensibility of the organ under normal conditions and the absence of symptoms referred to it, often when it is pathologically affected, make it seem probable that it is the site of disease in connection with syphilis more frequently than is indicated by the literature. Clinical syphilis of the spleen occurs early, in the form of acute splenic tumor with or without pain, late as interstitial splenitis, as solitary or miliary gummas and as amyloid disease of the spleen. In addition, the spleen is frequently enlarged as a result of interstitial splenitis and perisplenitis in association with visceral syphilis elsewhere. Mention has already been made of isolated cases of syphilis of the liver in which the spleen is enormously enlarged, simulating the picture of Banti's disease.

SPLENIC HYPERTROPHY IN EARLY SYPHILIS (Syphilitic Splenomegaly)

Incidence.—As a clinical entity, splenic enlargement in association with the earlier manifestations of syphilitic infection, was first noted by Biermer¹ in 1862. In 1874, A. Weil² published observations on splenic hypertrophy in acute syphilis. Similar observations are recorded by Gold,³ Columbini,⁴ Bruhns,⁵ Wewer,⁶ Haslund,⁷ Nolte,⁸ and Avan-

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* Studies and Contributions of the Department of Dermatology and Syphilology of the University of Michigan, service of Dr. Udo J. Wile.

1. Biermer: *Sweitz. Ztschr. f. Heilk.* **1**:118, 1862.

2. Weil, A.: *Deutsch. Arch. f. klin. Med.* **13**:317, 1874.

3. Gold: *Vrtljschr. f. Dermat. u. Syph.* **12**:463, 1880.

4. Columbini: *Instituto Dermosifilopatico della Universita di Siena*, 1895, cited by Bruhns.

5. Bruhns: *Deutsch. Arch. f. klin. Med.* **64**:450, 1899.

6. Wewer: *Deutsch. Arch. f. klin. Med.* **17**:459, 1876.

7. Haslund: *Arch. f. Dermat. u. Syph.* **14**:346, 1882.

8. Nolte: *Inaugural Dissertation*, Greifswald, 1883.

zini.⁹ In an extensive study of early cases of syphilis, Elliott and I¹⁰ found splenic tumor in over 36 per cent. of the cases studied. In this series of cases, the determinations were made by palpation alone. We determined, moreover, that enlargement of the spleen may occur even before secondary dissemination, and that splenic enlargement probably represents the earliest syphilitic visceropathy. Soukernik,¹¹ in a similar study, found splenic enlargement in thirty-seven of sixty-one cases examined, and pain in six of these.

Symptoms.—Usually enlargement of the spleen at this stage of the disease is symptomless. This accounts for the fact that it is not more frequently observed. The occasional anemia and digestive disturbances which were sometimes noted in association with the enlargement by Neumann¹² and by Elliott and myself, are probably not part of the enlargement of the spleen itself, but belong rather to the constitutional infection.

Pain.—Pain as a rule is absent, but was found in six of our cases and is noted also by other authors. In one case observed by myself, abdominal pain referable to the spleen was the chief cause of complaint. In this case it was exquisite and was promptly relieved by antisymphilitic treatment.

Tumor.—Of thirty-six cases in the series observed in my clinic, nineteen were soft; the spleen extended well below the costal margin; the edge was rounded and the enlargement was similar to that found in typhoid or other general infections. The remainder were firm, readily palpable and similar to the interstitial splenitis of chronic malaria.

Blood Findings.—In twenty-seven cases in which the blood was carefully studied in Elliott's and my series, fourteen showed a leukocytosis of over 10,000.

Course.—In untreated cases the spleen may become permanently enlarged, and the early syphilitic hypertrophy may develop into chronic interstitial splenitis. Under the influence of treatment, however, the spleen rapidly decreases in size. The pain is almost instantly relieved by treatment. In a few cases in our series, notwithstanding vigorous treatment, the spleen remained constantly enlarged as late as one year after treatment. We were able thus to trace the course of the disease from an early splenitis to an interstitial type.

Prognosis.—The prognosis for restitutio ad integrum rests on the early diagnosis. I am inclined to think that the readiness with which

9. Avanzini: Vrtljhr. f. Dermat. u. Syph. **16**:379, 1884.

10. Wile and Elliott: Am. J. M. Sc. **150**:512, 1915.

11. Soukernik: Thèse de Paris, 1896.

12. Neumann: Spez. Path. u. Therap. in Nothnagel **23**:440, 444 and 446.

early splenic enlargement becomes converted into interstitial splenitis, without treatment, has a decided bearing on the future prognosis of the disease, although there is little data bearing on this subject. As a lymphatic structure and one having such an intimate relation to the blood stream, it is not inconceivable that the spleen in cases of chronic syphilitic splenitis serves as a depot for further distribution of spirochetes. As such, acute splenic tumor might well have an important bearing on the prognosis of late syphilis.

Treatment.—The treatment is that of constitutional syphilis.

LATE SYPHILIS OF THE SPLEEN

Late involvement of the spleen is exceedingly rare, both clinically and pathologically, as compared with syphilis of other organs. Interstitial splenitis, described first by Virchow,¹³ and a common finding in hereditary syphilis, gummous splenitis and amyloid disease, are the pathologic types noted.

INTERSTITIAL SPLENITIS

This seldom occurs alone, at least clinically, but is most frequently found in association with syphilis of the liver, syphilis of the kidneys and of other viscera. The form in which it occurs is identical with that in cases of broken compensation and of cirrhosis of the liver. Reference has already been made to cases of chronic splenic tumor simulating primary splenomegaly and cases of syphilitic cirrhosis in which the enlargement of the spleen is the dominant, striking entity. Martland¹⁴ has described an interesting case of syphilitic cirrhosis of the spleen in association with general amyloid changes. A parenchymatous splenitis clinically apparent as a soft chronic enlargement is described also by Virchow. As a clinical entity alone, I believe it has not been recognized, but is principally the subject of an occasional pathologic report.

Symptoms.—Except for the increase in size, there are absolutely no clinical manifestations associated with chronic interstitial splenitis. In a few cases in which the increase is great, enlargement in the abdomen is noted. In those cases simulating Banti's disease, the tumor, and occasionally acites, may be striking features. To palpation, the spleen is usually firm, resistant and occasionally slightly tender. Gastro-intestinal symptoms sometimes found are usually referable to syphilis of the liver or other associated visceropathies. According to Neumann,

13. Virchow: Virchows Arch. **15**:319, 1858; Ueber die Natur der Constitutionell Syphilitischer Affectionen, *ibid.*, 1859.

14. Martland: Reprint, City Hospital Medical and Surgical Reports. Presented to the New York Pathological Society, 1908.

it is difficult to point out the part played by interstitial splenitis in associated syphilitic anemia. As chronic interstitial splenitis may occur without marked change in the blood stream, it is more than likely that the anemia and the blood changes are related more particularly to bone marrow changes than to the changes in the spleen itself.

Diagnosis.—Diagnosis is possible only in the presence of a large, firm tumor in which all other causes of splenic enlargement may be excluded. In the presence of other syphilitic manifestations, and with a positive Wassermann test, chronic enlargement of the spleen is no longer so difficult of recognition as syphilitic splenitis, as previously stated by earlier writers. In those cases in which the spleen is not sufficiently enlarged to palpate, the diagnosis *intra vitam* is impossible.

Prognosis.—The prognosis for disappearance of the tumor is not good. The association of other visceropathies, particularly of amyloid disease of the spleen and liver, of syphilitic disease of the liver itself other than amyloid disease, makes the prognosis unfavorable, not necessarily for the splenitis itself, but for the general syphilis of which the interstitial splenitis is a part.

GUMMATOUS SPLENITIS

This form is common in syphilis of the new-born, but exceedingly rare in acquired syphilis. In a large number of cases of late syphilis, I have not seen one case of clinical gummatous splenitis. Isolated cases are described by Rokitansky,¹⁵ Virchow, Wagner,¹⁶ Neumann, Pihan du Feillay,¹⁷ Gregoric,¹⁸ Gold, Litten,¹⁹ Cooper Forster,²⁰ Deguy²¹ and others. Most of these, however, were studied pathologically and were not recognized as clinical entities. Two forms are described—the large gummatous form which manifests itself clinically as a diffuse enlargement of the spleen in which there are palpable gummatous nodes, varying in size from that of a pea to that of a walnut, and miliary gummas. The first form is clinically recognizable. The second form is recognizable pathologically only. In the latter case the organ itself may or may not be generally enlarged, and the syphilitic nature of the disease is demonstrated only at the postmortem examination. The gummatous form may occur in association with amyloid disease of the spleen or as a part of interstitial splenitis.

15. Rokitansky: *Lehrbuch der Pathologisch. Anatomie* 3:254, 1855.

16. Wagner: *Arch. d. Heilkunde*, 1863, p. 430.

17. Fiellay, Pihan du: *Union Medicine*, 1862, cited by Robert, *Thèse de Paris*, 1905.

18. Gregoric: *Memorabilin Heilbronn*. 15: No. 3, 1870.

19. Litten: Cited by Neumann, p. 446.

20. Forster, Cooper: *Med. Times and Gaz.*, London, 1862.

21. Deguy: *Thèse de Paris*, 1900.

AMYLOID DISEASE

There is nothing in the clinical picture of amyloid disease of the spleen due to syphilis which in any way distinguishes it from amyloid disease due to other causes. Not infrequently, as has been mentioned in the foregoing, there are associated gummatous lesions in the spleen itself, in which case the diagnosis is simplified. Amyloid disease of the spleen can be recognized clinically as such in the presence of amyloid changes in the intestine or in the viscera. The syphilitic nature of such amyloid changes may be presumed when, in addition, the Wassermann test is positive. Usually, however, amyloid disease due to syphilis, like miliary gummas of the spleen, is a pathologic entity rather than a clinical one.