Widespread superficial thrombophlebitis as a manifestation of secondary syphilis — a new sign

A report of 2 cases

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Summary

Two patients with serologically proven secondary syphilis also showed multifocal superficial thrombophlebitis. All manifestations cleared when appropriate antisyphilitic treatment was instituted. Although *Treponema pallidum* could not be demonstrated in the thrombophlebitic veins, the organism was considered responsible, either directly or indirectly. Multifocal superficial thrombophlebitis should be regarded as a new sign of secondary syphilis.

Syphilis is a disease with protean manifestations and truly lives up to its reputation of imitating many diseases. This is well documented in recognized textbooks.

Two patients with secondary syphilis, which manifested with widespread superficial thrombophlebitis as an integral part of the clinical picture, are presented. In both cases the response to penicillin was dramatic.

The spirochaetaemia of secondary syphilis leads to multisystem involvement, but multifocal superficial thrombophlebitis has not been described as a sign. A computer-based literature search on the MEDLINE database extending back to 1966 produced no references to this phenomenon. Possible pathogenic mechanisms are considered.

Case reports

Case 1

A 23-year-old man presented at Tygerberg Hospital in 1981 with a 2-week history of painful bumps on the limbs and painless ones on the trunk. He was sexually active, but no history of a penile or mucosal lesion could be elicited. Before admission he had received salicylates and antihistamines without any effect. There were no other points of note in the history.
On examination a generalized microlymphadenopathy was evident. The glands were small and of rubbery consistency. There was a moth-eaten-type alopecia. A symmetrical maculopapular eruption of oval lesions 0.5 - 1 cm in diameter was present on the trunk. The eruption was more pronounced on the lateral aspect of the thorax.

On the limbs as well as on the upper anterior trunk there were numerous linear pigmented lesions varying from 1 to 12 cm in length. Their positions corresponded with the position of the superficial veins. On palpation these lesions were firm, but not overly tender and distinctly cord-like. Clinically they were typical of the healing stage of thrombophlebitis. On the anterior thigh they manifested as ovoid pigmented nodules.

The VDRL test was positive to the titre of 1:256. The fluorescent treponemal antibody absorption (FTA-ABS) test was also positive.

A diagnosis of secondary syphilis was made and the patient treated with intramuscular benzathine penicillin G 2.4 million U weekly for 3 weeks. When he was seen at follow-up 2 weeks later, no lesions could be detected and after completion of treatment the patient was discharged.

A 2.5 cm segment of a subcutaneous thrombophlebitic vein was removed under local anaesthesia and submitted for histopathological examination. This confirmed the presence of thrombophlebitis without diagnostic features. A lymphocytic infiltrate occurred perivascularly, intramurally and in the thrombus. No spirochaetes could be demonstrated. An elastin stain demonstrated an internal elastic lamina but no external one.

This patient was diagnosed and treated for secondary syphilis on the grounds of bizarre alopecia, maculopapular syphild, lymphadenopathy, thrombophlebitis and positive serology.

Case 2

A 19-year-old man presented at the Department of Medicine at Tygerberg Hospital in 1981 with history of headache, malaise, anorexia and epigastric discomfort of 2 weeks' duration. He had previously been well. There were no other notable points in the history.

On examination he was pyrexial and had a generalized lymphadenopathy. The nodes were 0.5 - 1 cm in diameter, rubbery and non-tender. His throat was infected and the spleen was palpable. A tentative clinical diagnosis of infectious mononucleosis was made. Numerous laboratory investigations provided no further clarification. The results of the following tests were negative: Paul-Bunnell (x 2); Weil-Felix; Brucella antibody test; PPD and blood cultures. The following were normal: chest radiograph; white cell and differential counts were normal. The patient's blood cultures. The following were normal: chest radiograph; white cell and differential counts were normal. The patient was discharged.

Eight days after admission the patient developed a skin rash and was referred to the Department of Dermatology. The rash consisted of 8 - 9 red nodular, cord-like, firm and tender symmetrical lesions on the anterior aspect of the thighs. Clinically they were consistent with a thrombophlebitis. On closer examination, several pigmented cord-like lesions were found on the lower legs. They were regarded as the healing stage of thrombophlebitis. A small scar was seen on the glans penis. The VDRL test was also positive to a titre of 1:512. The FTA-ABS test was also positive.

A diagnosis of secondary syphilis was made and the patient was treated with intramuscular benzathine penicillin G 2.4 million U weekly for 3 weeks. His illness responded dramatically and at follow-up after 48 hours the lesions on the thighs had disappeared. Two weeks later no abnormality could be found on clinical examination.

A punch biopsy specimen of one of the nodular lesions was submitted for histopathological evaluation, but unfortunately the subcutaneous fat was not included in the specimen. The epidermis and dermis were normal.

This patient was diagnosed and treated for secondary syphilis on grounds of: constitutional symptoms, pharyngitis, generalized lymphadenopathy, healed chancre, thrombophlebitis and positive serology.

Discussion

Two patients are described with secondary syphilis, both of whom displayed familiar clinical signs of the disease and the diagnosis was confirmed serologically. Additionally, both showed widespread superficial thrombophlebitis. This phenomenon has not been described previously. Institution of treatment with penicillin resulted in prompt healing.

Using the Warthin-Starry stain, Treponema pallidum could not be demonstrated in the thrombophlebitic vein from case 1. A fluorescent antibody technique was not used. Considering the fallibility of this stain, the possibility that few or no organisms were present, and the fact that histopathological examination was carried out during the healing stage, this finding is not unexpected.

The pathogenesis of thrombophlebitis is purely speculative. Direct lodging of spirochaetes in the wall of veins may give rise to inflammation and subsequent thrombosis. The spirochaetaemia of secondary syphilis could provide the agent with access to vascular structures. A similar mechanism might be operative in rickettsial diseases. The affinity of T. pallidum for vascular structures is well known, but there is no explanation for preferential involvement of veins.

An indirect mechanism was considered as an alternative, possibly immunologically mediated.

The occurrence of thrombophlebitis in these 2 patients with secondary syphilis could be purely coincidental. The disappearance of all signs including the thrombophlebitis with appropriate treatment argues against this.

Thrombophlebitis is not an uncommon clinical diagnosis. However, the occurrence of widespread thrombophlebitis as a manifestation of secondary syphilis has not been documented previously. Clinicians are alerted to this interesting clinical presentation of this imitator of disease. Syphilis should be included in the differential diagnosis of multifocal thrombophlebitis.

REFERENCE