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## Ringworm-like Late Syphilides

Z. STARZYCKI

*Clinic of Dermatology, Medical Academy, Cracow, Poland*

**A peculiar form of late, superficial, serpiginous, non-ulcerative syphilides, leaving no visible scars, resembling clinically the ringworm of the glabrous skin, showing the granulomatous histopathological structure and relatively abundant *T. pallidum*, predominantly spread around the blood vessels is described. Key words: *T. pallidum*.**

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Z. Starzycki, Clinic of Dermatology, Medical Academy, Cracow, Poland.

Nowadays, late cutaneous syphilis is observed extremely rarely (1), and every misdiagnosed, clinically atypical case is remarkable, as is the one reported below.

### CASE REPORT

A 54-year-old married woman was admitted to our Clinic because of skin lesions of 5 months' duration and slowly enlarging peripherally; they had been misdiagnosed by her dermatologist as ringworm several weeks earlier. Positive serological tests for syphilis (STS) were revealed during a mass serological screening campaign in the Cracow region. The general health of the patient was satisfactory. She had three non-examined adult children. STS of her husband were negative. The patient has never left Poland, i.e. has never travelled to the tropics.

Examination: on the right side of her neck there was a lesion 6×7 cm in diameter, forming an irregular ring composed of densely grouped rose-colored papules covered with delicate whitish scales without tendency to ulceration, and leaving no visible scars (Fig. 1). In the centre of this ring the formation of the second one, also irregular, was seen. The lesion resembled closely the ringworm of the glabrous skin. Analogous but smaller lesions were located on the left preauricular region and on the left arm. The oral mucosa and anogenital region were free of lesions.

Routine laboratory investigations of blood and urine were normal. Darkfield examination for *T. pallidum* of the tissue fluid squeezed from the artificially-eroded margin of the lesion, repeated 5 times, gave negative results, as did mycologi-

cal examinations including culture. Chest X-ray examination as well as internal, ophthalmological, neuropsychiatric and laryngological consultations did not reveal pathological changes.

The serum Wassermann reaction (WR) was strongly positive, VDRL test: positive, 1:16; TPI test: 100% of immobilization, FTA-200 test: positive, 1:4000; FTA-ABS test: positive.

Cerebrospinal fluid: cell count, protein level, Pandy-Nonne test, WR and VDRL test were negative. The TPI test: 55% of immobilization, FTA test: positive, 1:10.

Two biopsies, one from the centre of the syphilide and the second one from its margin were made. In the sections stained with haematoxylin-eosin (HE), granulomatous infiltrates of the tuberculoid type, without necrosis, with epithelioid and giant cells of Langhans' type were observed around the skin vessels and around hair follicles (Fig. 2).

In sections stained with modified Krajan's silver impregnation method (2) the epidermis was free from treponemes.



Fig. 1. Ringworm-like syphilide on the neck.

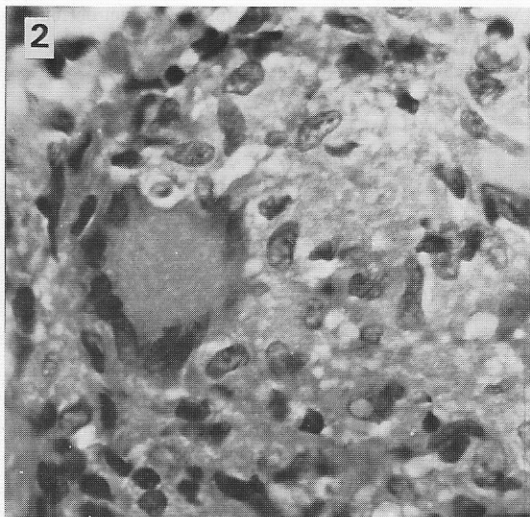


Fig. 2. Histopathological structure of the syphilide on the neck; tuberculoid-like structure (HE, magnific.  $\times 480$ ).



Fig. 3. The spiral form of *T. pallidum* and argyrophilic granules within the infiltrate (modified Krajan's method magnific.  $\times 1500$ ).

They, however, were scattered among the cells of dermal infiltrate, especially in the vicinity and within the walls of dilated vessels. Only a single treponeme had the classical spiral form, the others had a beaded appearance, or resembled spiral shadows, spiral fragments or argyrophilic granules (Fig. 3).

The patient was treated with procaine penicillin in a total dose of 21.6 megaunits. The Herxheimer reaction after the first injection of penicillin was not observed. After two years, because of seroresistancy, the penicillin therapy was repeated in a total dose of 36 megaunits. Further follow-up was made impossible owing to the patient's refusal.

## DISCUSSION

The clinical pattern of the lesions is exceptional in this case as its superficial spreading, the lack of any visible scar on the postserpiginous surface of the skin, and the formation of a secondary ring in the centre of the syphilide enhance its similarity to ringworm. This may be the source of misdiagnosis by untrained practitioners.

In our case, the tuberculoid-like granulomatous structure without coexistent necrosis contrasted with the infiltrate of early syphilides, which are predominantly composed of lymphocytes and plasma cells.

Noteworthy is the presence of many fragmented, beaded and granular treponemes within the granulomatous infiltrate of the syphilide. Using the indirect

immunofluorescence method in a case of cutaneous gumma, Handsfield et al. (3) found numerous spiral treponemes, as well as abundant granular material, which possibly correspond to either fragmented treponemes or free treponemal antigen. The question is whether these phenomena, which have never been observed in early syphilis, appear in its late stage and are connected with cell-mediated immunity.

The negative results of darkfield examination in our case may be explained by a deeper location of treponemes in comparison with the findings in early syphilides.

Further observation will probably permit us to confirm the hypothesis that the occurrence of ringworm-like superficial syphilides in the late stage of the illness is a result of pathomorphosis connected with the widespread use of antibiotics.

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