THE DIFFERENTIAL DIAGNOSIS OF CIRCINATE TUBERCULOID LEPRIDES AND POLYCYCLIC SYPHILIDES

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Although the differential diagnosis between syphilis and leprosy is seldom attended with great difficulty, it is important to realize that this is not always the case. Not only is their distinction sometimes very difficult, but there is no doubt that occasionally the wrong diagnosis is made, with possible disastrous results to the patient.

The following case histories illustrate this point, while they clearly indicate the basis on which differentiation should rest.

Case I. Leoma, an adult male, admitted to the leper asylum in 1915 with obvious signs of leprosy, was reexamined in July, 1933, when the following lesions were noted: On the forehead, ears, penis and scrotum there were raised polycyclic elements, thick and firm to the touch, and on the right shoulder a large smooth scar, the result of vigorous trichloracetic acid cauterization. There were no other findings whatsoever, and the bacteriological examination was constantly negative.

Subsequent history.—Treatment had thus far consisted of intramuscular injections of sodium morrhuate (130 cc.). After a short course of sodium hydnocarpate, he was now given intradermal injections of iodized ethyl esters. The lesions were injected thoroughly and repeatedly, but without effect. This lack of response was so unusual for tuberculoid macules that their true nature was at last suspected. Three injections of novarsenobillon were given, and this treatment was immediately followed by disappearance of the lesions.

Case II. Kobefu, an adult male, was admitted on October 3, 1936, with numerous macules on the arms, legs and body that everywhere gave the impression of being residual. They consisted of: (1) slightly raised, frequently interrupted circinate "margins," slightly lighter than normal, not granulated, with (2) either a hyperpigmented center (in small lesions) or minute black spots punctuating an otherwise normal center, often following the direction of the border. The hands, feet, nerves and muscles were all normal. The lesions were said to have existed "off and on" for twenty years.

Subsequent history.—The supposed macules did not respond to intradermal treatment. As they would rapidly have disappeared if they had been tuberculoid-leprotic, three intravenous injections of novarsenobillon were given. The effect was immediate and the conclusion obvious.

CASE III. GERMAN, a young lad of 16, was admitted on February 20, 1934. The general condition was excellent. There was tachycardia with marked pulsation of the thyroid gland. No other abnormality except acutely raised macules on face, trunk and limbs, and nonelevated, copper-colored macules on legs and forearms. The tail of the right eyebrow was scanty. The ulnar nerves were not thickened and there was no paresis, atrophy or anesthesia. Bacilli were not found.

Subsequent history.—In December, 1936, after all macules had been destroyed by intradermal treatment, there suddenly appeared a fairly large number of nodular thickenings along the superficial nerves of both forearms (nodular neuritis). These lesions gradually disappeared with repeated local injections of iodized esters. In November, 1937, the patient was examined with a view to discharge when two typical tuberculoid lesions were discovered on the scrotum and one on the penis. These consisted of raised, finely granulated borders, incomplete and with normal centers. At this stage he was presented to a meeting of the local branch of the Medical Association of South Africa, when the correctness of my diagnosis was questioned. Despite this, no antisyphilitic treatment was given; the lesions were injected intradermally with the expected results, namely, rapid resorption and typical scar formation.

In the following month (December, 1937) the patient was discharged, the macules all typically scarred, with complete or almost complete repigmentation. Here and there was a pin-point granule, especially on the face; these it had been impossible to inject as the patient refused further treatment. It was noted that they might be negligible but would probably need watching. A year later (December, 1938) the patient was readmitted. The pin-point granules had developed into small tuberculoid macules, all on the face but few in number. The healed macule on the scrotum was still visible, but a new, incomplete tuberculoid ring had developed beyond the limits of the scar. This spread alone would suffice to exclude syphilis.

CASE IV. LENTOKOLO, an adult male, was admitted on October 14, 1938, with the diagnosis of lepromatous leprosy. The lesions were said to have appeared a month before admission during a course of antisyphilitic treatment for "a swelling on the forehead." The condition on admission was interesting, there being: (1) circinate lesions on the face, (2) a "swelling" (A) over the inner third of the right supraorbital ridge, (3) another round, apparently deep-seated swelling (B) on the outer third of the left supraorbital ridge, and (4) two small areas of alopecia on the scalp above the forehead.

A provisional diagnosis of "syphilis, not leprosy" was made for the following reasons: (*a*) The raised circinate lesions were smooth-surface, not granulated, despite gross infiltration. (*b*) The healed center was black, instead of normal or brown. (*c*) Swelling "A" was not neural and perineural (supraorbital neuritis), but bony (syphilitic periostitis). (*d*) Swelling "B" was not nodular, but consisted of an irregular intradermal mass of almost cartiliginous consistence. (*e*) The two hairless patches on the scalp corresponded to healed circinate lesions.

Subsequent history.—A second complete examination revealed the presence of residual specific induration of the foreskin, with enlargement of the

inguinal lymph nodes. The patient was immediately separated from the inmates of the asylum and given a short course of arsenotherapy, the results of which were immediate and spectacular.

DISTINCTIVE FEATURES

Of the various morphological features which enable one to make a differential diagnosis between the two diseases, the following have been found to be the most characteristic:

1. Tuberculoid leprotic lesions are not strictly polycyclic. They may consist of interrupted rings, but these are never formed by the more or less close juxtaposition of small semilunar elements.

2. The surfaces of raised tuberculoid "rings" are nearly always granulated, either finely or coarsely, though in some cases where infiltration is more deeply seated it may become smooth, as in syphilis.

3. The coexistence of polycyclic syphilides with black pigment. This pigmentation may be uniform or finely punctate; it may be situated on the sites of "healed" lesions, or it may run along the base of active, raised syphilides, forming, as it were, a shadow of the lesions. Such a disposition I have not observed in leprosy.

4. The crinkled "tissue-paper" appearance of healed tuberculoid leprides is pathognomonic. It is very exactly comparable to the film which gathers on the surface of a cup of tea or coffee as it cools. Both appearance and color are identical. The syphilitic scar is very different, while the leprotic scar often coexists with active leprides, which thus betray their nature.