CASE REPORT

Latapi’s Lepromatosis (Lucio’s leprosy) without Lucio’s phenomenon in a pubertal boy

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Introduction

A diagnosis of Latapi’s lepromatosis (Lucio’s leprosy) is usually established in the setting of Lucio’s phenomenon. The report by Diogenes et al.1 showed that Latapi’s lepromatosis can be diagnosed in the absence of Lucio’s phenomenon.

Our clinical experience with 30 patients with Lucio’s phenomenon and Latapi’s lepromatosis has indicated what features are strongly suggestive of Latapi’s lepromatosis.2 We then recognised that one of our patients in our earlier series probably had Latapi’s lepromatosis at the time of presentation. Also this patient was on the brink of puberty at the time of diagnosis.

CASE REPORT

The patient, a boy aged 13 years and 9 months, was brought to this hospital by his mother, because of an asymptomatic skin rash of two months duration, which had become generalised. Other complaints included a loss of eyebrow hair for 1 year, and mouth breathing for 6 months. He was born in the Mexican state of Sinaloa, but had resided in the United States for the previous 3 years.

His height was 4 feet and 10 inches (148 cm), he weighed 87 pounds (39·5 kg). The rash consisted of numerous, non-palpable, thread-like and blanchable blood vessels. These were interpreted to be eruptive telangiectasias. One observer described his face as ‘swollen and puffy’; another as ‘diffuse central facial edema’. His ear lobes were enlarged. His hands and fingers, as well as his feet and toes, were described as having a non-tender, non-pitting edema. In addition the toes had a ‘red-purplish discolouration’. Eyebrow and eyelash hair was absent, and hair on his extremities was scant. A rhinitis prevented easy breathing through the nose.
His liver was palpable 15 cm below the right costal margin, and the spleen was palpable 15 cm below the left costal margin. Negative findings included the absence of any enlarged nerves, the absence of any nodular or dermatofibroma-like skin lesions, and the absence of any necrotic or ulcerative lesions. Sensation was intact as judged by light touch and pin-prick perception, as well as by heat and cold discrimination. There was no motor loss. A plain x-ray of the abdomen confirmed the organomegaly.

Laboratory values included a hemoglobin of 10.9 gm/dl (normal adult men range 12.9–16.6), a serum globulin of 3.9 gm/dl (upper limit of normal 3.3), a serum follicle stimulating hormone (FSH) of <1.0 mIU/ml (normal adult male 1–14), a serum luteinizing hormone of 5.0 IU/L (normal adult male 1.0–8.0), a serum testosterone of 40 ng/dl (normal adult male 200–1000), and a serum alkaline phosphatase of 86 units/L (normal adult 35–110).

A punch biopsy of skin was performed. Smears from the dermal margin of the biopsy site contained many Mycobacteria as determined by both carbolfuchsin, and oramine and rhodamine fluorescence staining. Tissue sections showed a heavy infiltrate of macrophages in the dermis and subcutis. Acid-fast bacilli were numerous, B.I. of 5·8, and were easily found in endothelial cells. In addition, near the junction of the dermis and subcutis, was a vessel with endothelial proliferation leading to lumen occlusion, as well as with an adventitial infiltration, (Figure 1).

Our impression was diffuse non-nodular lepromatous leprosy, as judged by the criteria of Ridley et al.3, and the pure and primitive lepromatosis of Latapi and Zamora. He was treated with Rifampin, initially 300 mg daily, and dapsone, initially 50 mg daily for 4 years, followed by dapsone monotherapy until he was lost to follow-up 7 years after presentation.

The patient’s clinical course was marked by the passage through puberty. Alkaline phosphatase values became elevated within 6 months of starting treatment, remaining elevated for 3 years. FSH values became normal by 6 months. Testosterone and hemoglobin values gradually increased, achieving normal levels by 2.5 years. Erythema nodosum leprosum (ENL) began after 10 months of antibacterial treatment, the latter being managed with thalidomide, 100 mg daily, for 6 years.

Figure 1. A photomicrograph from the dermal-subcutaneous junction shows a vessel with its lumen occluded by endothelial proliferation, and its adventitia, as well as the surrounding tissues, infiltrated by macrophages. H&E staining, 40x objective.
The eruptive telangiectasias faded with treatment and resolved within 6 months. Breathing improved after two months. No hair regrowth was observed, nor did sensory impairment occur.

Discussion

The clinical and histologic findings in this patient constitute substantial evidence for the diagnosis of Latapi’s lepromatosis.

Diffuse non-nodular lepromatous leprosy is a clinical sine qua none for the diagnosis of Latapi’s lepromatosis, but this change, by itself, only suggests the possibility.

Of the features considered to be highly suggestive of Latapi’s lepromatosis this patient definitely had two: eruptive telangiectasias and diffuse infiltration manifested by swelling of the face. He did not have telangiectatic mats on his face or upper trunk. Palpable but not visible subcutaneous nodules, were not mentioned as either present or absent. Of the features that are supportive of a diagnosis of Latapi’s lepromatosis, but may be found in regular lepromatous disease, this patient exhibited two, alopecia of both eyebrows and eyelids, and rhinitis. A stocking-glove pattern of sensory impairment was not found in this patient.

Heavy parasitisation of endothelial cells by AFB is a histologic sine qua none for the diagnosis of Latapi’s lepromatosis, but this change, by itself, only suggests the possibility.

A feature strongly suggestive of a diagnosis of Latapi’s lepromatosis is the presence of a well developed lepromatous-granulomatous vasculitis. Such a change in this patient is similar to that illustrated in prior reports5,6 (in Rea and Jerskey,2 Figure 3a and in Donner and Shively,4 Figure 3).

This patient is the youngest lepromatous patient seen in our clinic. As judged by the recent report of Vargas-Campo,5 where four out of 174 patients with diffuse lepromatous leprosy were 14 years old or less at the time of diagnosis, the subject of this report is unusual but not unique.

References