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Type 1 Lepra Reaction and Pregnancy

Leprorreacción Tipo 1 y Embarazo

To the Editor:

Despite the considerable influence that pregnancy has on the course of the leprosy, there are very few studies on the subject.

We present the case of a 34-year-old Brazilian woman who had been living in Spain for 3 years. She came to our department with a 2-week history of painful, erythematous lesions on the skin of the face and limbs. She also described swelling and pain in the left foot. She was in good general health and she did not have fever. The patient reported an asymptomatic hypopigmented lesion on the right arm that had been present since childhood and had grown progressively. She had not considered it important until it became erythematous and painful, coinciding with the appearance of the other lesions (Figures 1 and 2).

In the past she had worked with leprosy patients for 4 years. She had 3 children, the youngest of 2 months of age.

On physical examination she presented numerous, well-delimited, infiltrated erythematous plaques on the limbs and face. Their surface was hairless. Some of the lesions had a raised border with a flat and hypopigmented center. The pinna of the right ear was infiltrated and erythematous.

Additional tests (full laboratory workup, radiographs of the chest and left foot, and abdominal ultrasound) were normal. The Mantoux test was negative. Neurological examination revealed a clear decrease in temperature, pain, and touch sensations in the affected areas, but was otherwise normal.

Biopsy of one of the plaques showed a sarcoid-type granulomatous infiltrate affecting the full thickness of the dermis, following the path of the neurovascular bundles towards the surface. Peripheral nerves were not seen. Ziehl-Nielsen stain revealed no acid-alcohol-fast bacilli,

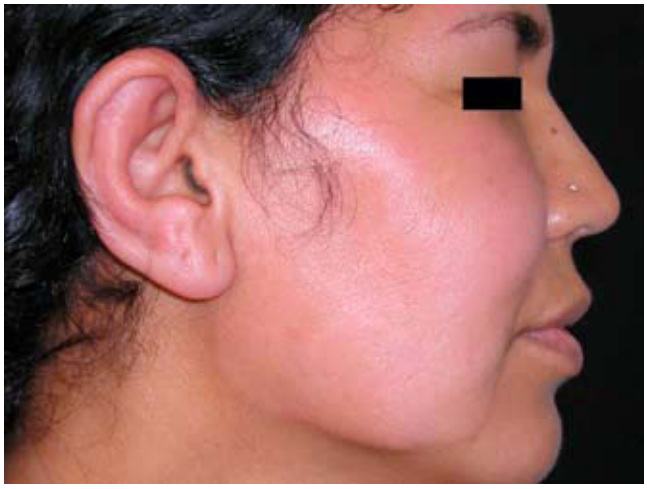

Figure 1 Edematous erythematous plaque on the right cheek and involvement of the pinna of the ear.

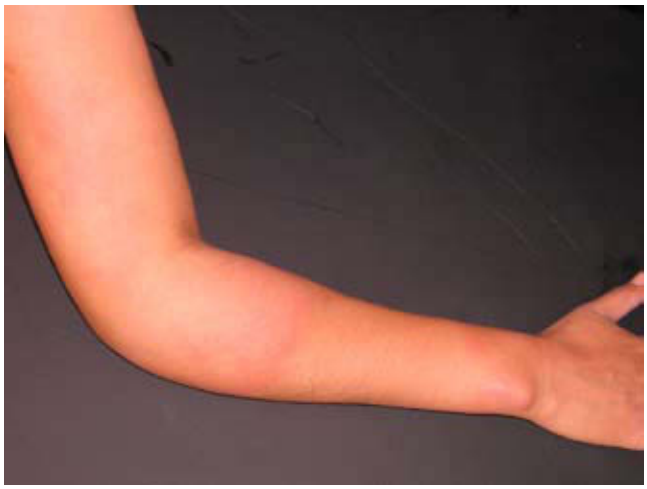

Figure 2 Lesion with well-defined borders on the right upper arm and forearm.

nor were acid-alcohol-fast bacilli found on study of the lymphatic fluid from the pinna of the ear or of scrapings from the nasal septum.

The clinical picture was compatible with a type 1 lepra reaction, triggered after delivery, in the course of a tuberculoid form of leprosy that had remained undetected for many years.

Treatment was started with rifampicin 600 mg/mo, dapsone 100 mg/d, and prednisone 40 mg/d in a tapering regimen. The swelling and pain in the left foot disappeared in a few days. The skin lesions showed a slower but nevertheless favorable response.

The immunological changes that occur during and after pregnancy have a marked influence on the course of leprosy.[1] Pregnancy can precipitate type 1 and type 2 lepra reactions. Type 1 reactions are most common during the puerperium, when cellular immunity returns to its normal levels. Type 2 reactions can occur during pregnancy or breastfeeding, and neurological damage occurs earlier in these cases than in patients who are not pregnant.[2] In addition, the risk of developing the disease and of recurrence in previously treated patients is higher during pregnancy.[3,4] A follow-up study of healthy pregnant women in an endemic area found that 6% developed leprosy, whereas the frequency was only 0.1% in the general population in the same area.[5] The main complication in these patients is neuritis. In a follow-up study of pregnant women with leprosy, 44% developed neuritis, which was clinically silent in 27% of them.[6] Silent neuritis produces a decrease in distal sensitivity, but no pain, swelling, or paralysis. It is particularly common between the sixth and ninth months after delivery. Periodic neurological examination is recommended during this period, independently of the symptoms a patient presents, in order to facilitate early detection and avoid possible progression towards irreversible nerve damage,

There is an increased risk of prematurity and of a low weight for gestational age in the newborn infant. It is essential to follow-up these children after birth, as there have been sporadic cases of the appearance of leprosy lesions reported in the first months of life.[7]

The risks for the mother and fetus are directly proportional to the bacterial load of the disease. Because of this, the World Health Organization recommends the same treatment in women who are pregnant as in those who are not. Treatment is based on the use of sulfone and rifampicin in the paucibacillary forms and sulfone, rifampicin, and clofazimine in the multibacillary forms. Rifampicin is essential, as it is the most bactericidal. Although no controlled studies in women have been reported, multiple therapy does not appear to be associated with a higher risk of abortions or congenital malformations. Children born to mothers treated with clofazimine may present a transitory hyperpigmentation at birth. Vitamin K should be administered to the infants of mothers who have received treatment with rifampicin in order to avoid postnatal hemorrhages. The hemolytic anemia that can be induced by sulfone adds to the physiological anemia of pregnancy. Oral corticosteroids and clofazimine can be used to treat lepra reactions. Thalidomide and thioamides, which are sometimes used as alternatives to clofazimine, are contraindicated during pregnancy.[8]

We present a case of type 1 lepra reaction after delivery. The growing number of patients with leprosy immigrating from endemic areas requires us to be aware of the effects of pregnancy on the disease and its specific management during this period.

Conflicts of Interest

The authors declare no conflicts of interest.

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