CASE REPORT

Leprosy with Erythema Nodosum Leprosum in Pregnancy: A Rare Phenomenon!

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Abstract

Leprosy is a rare event during pregnancy. A high index of suspicion is needed for prompt diagnosis, and a multidisciplinary approach is required for proper management. Multidrug therapy (MDT) is safe and effective during pregnancy and lactation. Hereby, we are reporting a case of lepromatous leprosy with erythema nodosum leprosum (type II lepra reaction) during the third trimester of pregnancy.

Keywords: Erythema nodosum leprosum, Lepromatous leprosy, Multidrug therapy.

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Introduction

Leprosy, also known as Hansen's disease, is an age-old disease, described in the literature of ancient civilizations. Elimination of leprosy as a public health problem (defined as a registered prevalence of less than 1 case per 10,000 population) was achieved globally in 2000. According to WHO 2017, there were 216,108 new leprosy cases registered globally in 2016.[1] Leprosy is a chronic infectious disease caused by an acid-fast bacillus, *Mycobacterium leprae*. Leprosy is transmitted via droplets, from the nose and mouth, during close and frequent contacts with untreated cases. The disease mainly affects the skin, the peripheral nerves, the mucosa of the upper respiratory tract, and also the eyes. In 1981, a WHO study group recommended multidrug therapy (MDT). Multidrug therapy consists of dapsone and rifampicin for all patients with clofazimine added for multi-bacillary disease. Leprosy is a rare event during pregnancy. Hereby, we are reporting a case of lepromatous leprosy with erythema nodosum leprosum (type II lepra reaction) during the third trimester of pregnancy.

Case Description

A 29-year-old-female, married since 10 years, G2P1L1 with 36.1 weeks, came at our antenatal OPD with fever with chills and headache since 2 days and multiple painful subcutaneous nodules all over the body since 1 day. She was previously admitted at the medicine side at 24 weeks of gestation for acute febrile illness with pruritus. There was no history of leprosy in the past. On examination, she was febrile (101°F), pulse 120/minute, BP 130/80 mm Hg, and multiple tender erythematous subcutaneous nodules seen over face, limbs, chest, and back (Fig. 1). Nerve sensation was normal. No deformity was seen. The dermatologist opinion was taken; punch biopsy taken from skin nodules revealed the diagnosis of lepromatous leprosy. She was started on dapsone (100 mg), rifampicin (600 mg), and clofazimine (50 mg). She was also started on dexamethasone for lepra reaction. Emergency lower segment cesarean section (LSCS) was done in view of intrauterine growth restriction (IUGR) with fetal distress at 36.6 weeks. Inj. hydrocortisone was given during the cesarean section. A 2.1-kg male baby delivered, cried immediately, and was continued on breastfeeding. She was discharged after stich removal on day 8 uneventfully. She was started on omnacortil with tapering doses for next 15 days. She was continued on MDT on discharge.

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Discussion

The global prevalence of leprosy is 0.32 per 10,000 population, and India accounts for 58.8% of the global burden.[2] Leprosy during pregnancy is encountered as a very rare event. This needs a high index of suspicion in lesions suggestive of the disease, especially in the absence of any suggestive history in the past. Several diseases, including infections and immunologically mediated disorders, have an altered course during pregnancy and puerperium because of metabolic changes during pregnancy and puerperium,

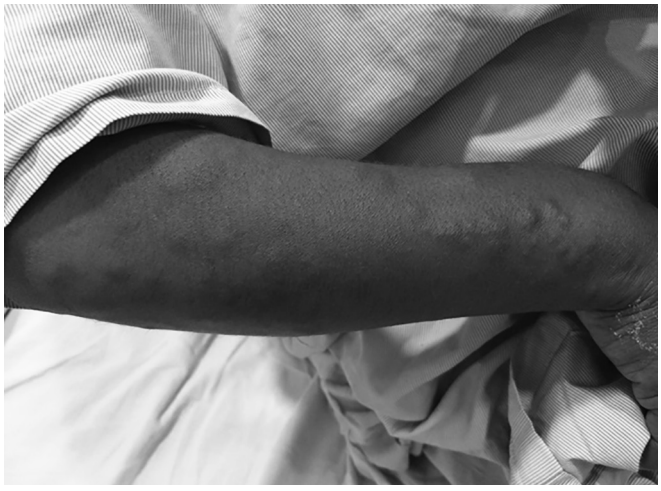

Fig. 1: Subcutaneous nodules on the right forearm

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altered secretions of steroids during pregnancy, and an altered immunological response during pregnancy. As a consequence of these changes in cell-mediated immunity during pregnancy and lactation, several autoimmune disorders have shown modulation of disease activity during this period including leprosy.[3] About 20–30% women develop signs and symptoms of leprosy for the first time in pregnancy. The increased load of *M. leprae* is most frequently seen in the third trimester. There are two types of immunologically mediated reactions seen in leprosy: type I and type II or erythema nodosum leprosum. In type I reaction, constitutional symptoms are minimal or absent. Type II reaction is due to immune complex deposition, occurs in multibacillary leprosy, and manifests as erythema nodosum leprosum, neuritis, and constitutional and systemic symptoms. As our patient presented with fever, headache, and painful subcutaneous nodules, she was admitted at the medicine side and started on steroids and after confirmation of diagnosis MDT started. She remained afebrile after MDT. Fetal monitoring was continued by daily fetal movement count (DFMC), nonstress test (NST), and ultrasonography with Doppler study. Multidrug therapy consisting of dapsone, rifampicin, and clofazimine is highly effective for people with leprosy and considered safe, both for the mother and the child. Ozturk and Tatliparmak describe a patient with multibacillary lepromatous leprosy who was treated with MDT during pregnancy and breastfeeding.[4] Anti-leprosy drugs are excreted into human milk but there is no report of adverse effects except for skin discoloration of the infant due to clofazimine. Multidrug therapy for leprosy patients should be continued unchanged during pregnancy and breastfeeding.

Conclusion

Leprosy in pregnancy is, however, a rare occurrence especially in the post-elimination era; a high index of suspicion is needed for prompt diagnosis and a multidisciplinary approach is required for proper management. Multidrug therapy is safe and effective during pregnancy and lactation.

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