

IMPETIGO HERPETIFORMIS: AN OBSTETRIC CONCERN

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Impetigo herpetiformis, a very rare form of pustular psoriasis occurring in pregnancy, is potentially serious and aggressive treatment is usually required. We report a case of a patient presenting with two consecutive pregnancies complicated by impetigo herpetiformis. The disease appeared much earlier than the classic third trimester presentation. The first pregnancy was induced because of worsening symptoms, while the second pregnancy ended in a stillbirth. Early diagnosis and treatment of impetigo herpetiformis is essential to reduce both maternal and fetal morbidity and mortality.

Case Report

A 27-year-old primigravida presented at 19 weeks' gestation, complaining of a papular skin eruption for the previous three months. This was diagnosed as psoriasis. The patient gave no family history of any skin conditions. At 36 weeks, she presented with a one-week history of malaise, fever, leg pains and worsening of the previously noted generalized skin eruption.

On examination, large circinate lesions with superficial pustules at the periphery and central desquamation were noted, mostly on the legs. Some scattered papules, pustules and psoriatic lesions were seen on the elbow and abdomen. A clinical diagnosis of impetigo herpetiformis, also called generalized pustular psoriasis of pregnancy, was made and treatment was commenced with Eucerine cream and oral dosage of 40 mg prednisolone daily. Two biopsies taken from the lesion showed acanthosis, parakeratosis and intraepidermal pustules filled with numerous neutrophils. The immunofluorescence studies were negative for IgG, IgM, IgA, C₃ and fibrinogen. Blood studies showed a leukocytosis of $13.2 \times 10^9/L$ (normal range $5-10 \times 10^9/L$) and mild hypocalcemia of 2 mmol/L (normal range 2.2-2.625 mmol/L). In spite of the treatment, the lesions got worse, and so labor was induced at 38 weeks, with the

delivery of an infant weighing 3.020 kg, with Apgar scores of 6 and 8 at 1 and 5 minutes, respectively.

Two days postpartum, the lesions began to improve and the patient was discharged home on 5-fluorouracil cream and clobetasol propionate ointment. When she was seen two weeks later, there was a marked improvement in her condition, although new pustular lesions were still appearing. The prednisolone therapy was re-commenced at 40 mg/day for one week, and the dose was gradually reduced over the next four weeks to 5 mg daily. There was some improvement, but since new lesions were still appearing, methotrexate 5 mg once/week orally was commenced and gradually increased to 20 mg weekly. Serial CBC and hepatic panel were performed weekly and vitamin D 50,000 IU daily and vitamin E were given as supplements for three months postpartum. The lesions resolved completely during this period, so methotrexate and prednisolone were gradually tapered off over the next three months.

At six months postpartum, all lesions had cleared completely, except for some mild postinflammatory pigmentation. Immediately after discontinuing the treatment, the patient became pregnant again. She had a recurrence of the extensive pustular lesions at 16 weeks, and treatment with prednisolone had to be started again.

At 32 weeks' gestation, the patient had a fetal biophysical profile which was normal. Unfortunately, she presented 12 days later with an intrauterine fetal death. She had a normal vaginal delivery of a stillborn infant weighing 1.820 kg.

Discussion

Impetigo herpetiformis is a very rare form of pustular psoriasis, which arises suddenly in a patient with no personal or family history of psoriatic skin disease. It usually occurs during pregnancy in the third trimester, but may occur as early as the third month.¹ It is potentially serious and aggressive treatment is usually required.²

The eruption consists of urticarid erythema which begins in the flexures, especially in the inguinal region, with superficial pustules arranged in rings or groups at the margins of the lesion. The lesions spread gradually until the entire body is involved, except for the face, hands and

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FIGURE 1. Lower limbs: extensive areas of erythema, maceration and pustules.



FIGURE 2. High-power micrograph: featuring subcorneal intraepidermal pustule.

feet. As the pustules break down in the central area, crusting and impetiginization result.

The skin eruption is accompanied by fever, malaise, delirium, nausea, diarrhea and vomiting, neutrophilia, elevated erythrocyte sedimentation rate, hypocalcemia and tetany. Severe dehydration, prostration and convulsions have been reported. Pruritus is generally not a problem and lesions gradually heal without scarring, unless infected or excoriated. Postinflammatory hyperpigmentation is regularly seen. Histology is similar to that of pustular psoriasis, with spongiform pustules of Kogoj and perivascular infiltrates within a focus of spongiotic epidermis. Direct and indirect immunofluorescence findings are negative.

The treatment of choice in pregnancy is prednisone 15-30 mg/day. Cyclosporine, a cyclic polypeptide immunosuppressant agent, is an effective drug for treating psoriasis. It is fetotoxic in animal studies at high doses. No adverse effects have been reported in the human fetus, however, there are no adequate and well-controlled studies in pregnant women. It should, therefore, be used only if the potential benefits justify the potential risk to the fetus. Although etretinate, an oral retinoid, and methotrexate, an antineoplastic agent, are the drugs of choice in the treatment of pustular psoriasis, they are not used in pregnancy because of their embryotoxic side effects. Antibiotics can be added if there is secondary infection. Fluid and electrolyte balance should be maintained and hypocalcemia corrected. As the fetal mortality is high, even when the disease appears well controlled with corticosteroids, fetal well-being should be monitored using biophysical profile and umbilical artery Doppler studies.

If fetal or maternal conditions deteriorate, pregnancy should be terminated by induction of labor or Cesarean section, as indicated. Maternal mortality is now uncommon, but stillbirth and intrauterine growth retardation may occur even when the disease appears to be controlled with corticosteroids.³

Low-dose methotrexate can be substituted in the postpartum period to prevent rebound of rashes, but is contraindicated in pregnancy and lactation. The disease remits after delivery but may recur in successive pregnancies.

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