

A Case of Severe Infected Eczema Complicated by Sepsis in Pregnancy

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Objective

Eczema, also known as atopic dermatitis, is a chronic skin condition that causes dry, itchy, scaly patches. It's a common condition that usually starts in childhood, but it can affect people of any age. Eczema during pregnancy can be unpredictable, with some women experiencing flare-ups and others seeing improvement. It's common for women of childbearing age to experience eczema, and it can affect up to half of all pregnant women.

We report this case to highlight the complexities of managing severe infected eczema complicated by sepsis during pregnancy, emphasizing the importance of multidisciplinary care, the use of high-dose steroids, and the prevention of steroid crises during labour for optimal maternal and fetal outcomes.

Case Summary

A 29-year-old woman, gravida 2 para 1, at 28 weeks’ gestation, presented with a severe flare of atopic eczema complicated by secondary bacterial infection and systemic features suggestive of sepsis. Her medical history included eczema, hypothyroidism, thalassemia trait, latent tuberculosis, and a previous caesarean section.

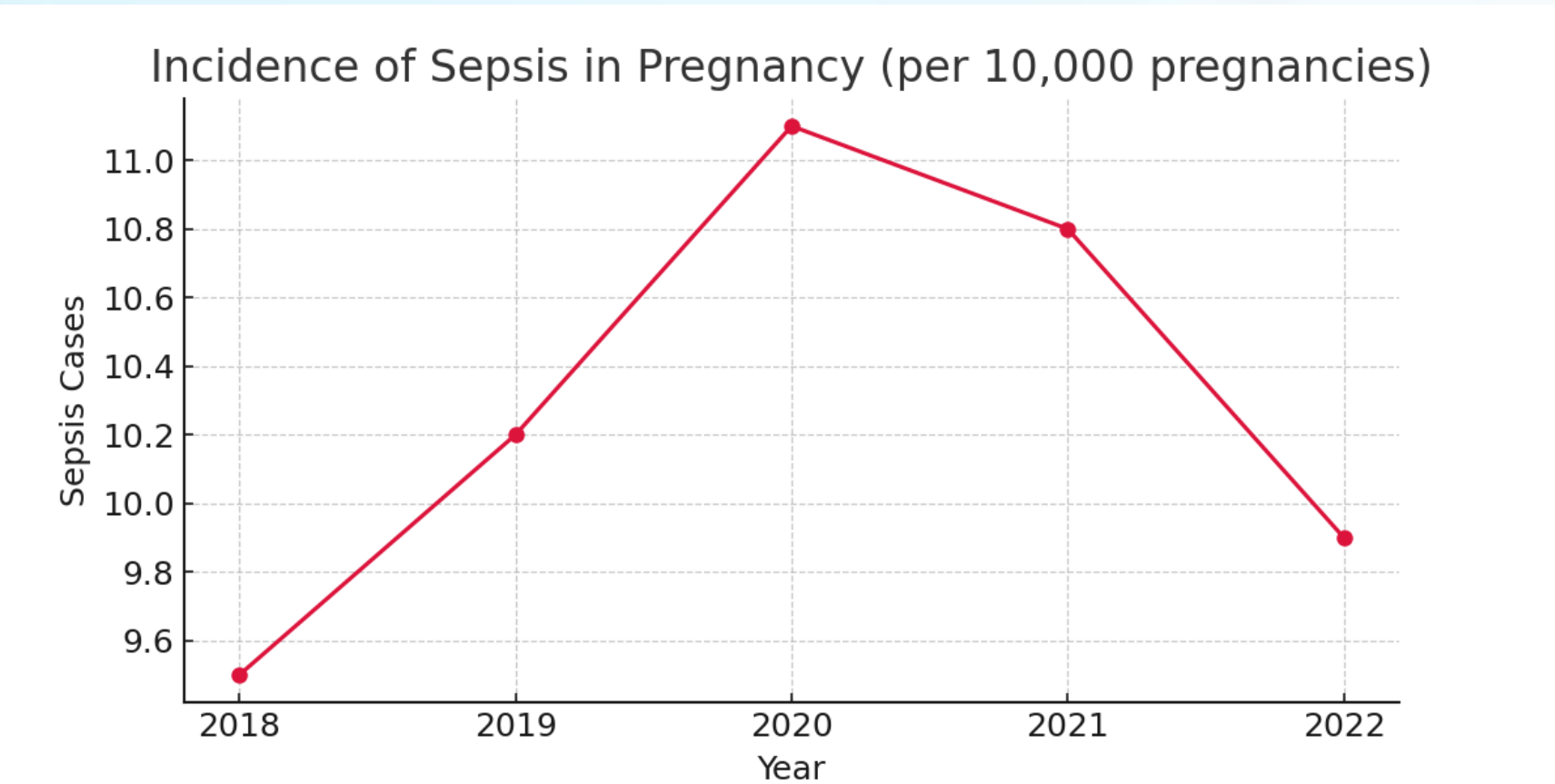
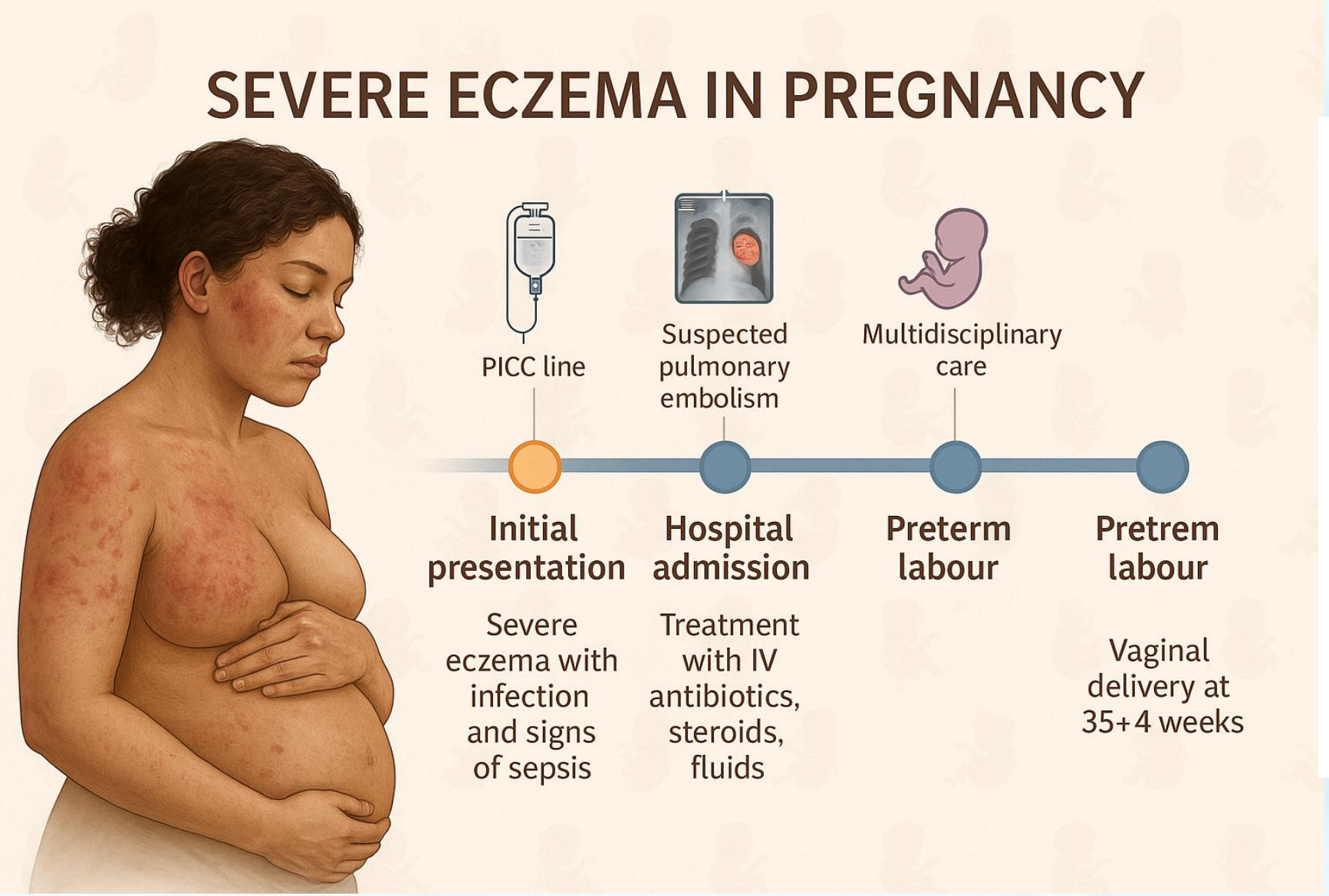
She was admitted with widespread erythematous, exudative, and painful skin lesions, predominantly on the limbs and trunk, associated with pyrexia, dehydration, and tachycardia. Blood tests revealed elevated CRP and eosinophilia, and swabs grew methicillin-sensitive Staphylococcus aureus.

She received high-dose intravenous flucloxacillin, supportive care with fluids and emollients, and was commenced on oral prednisolone. Due to poor venous access and prolonged therapy, a PICC line was inserted. She was also treated empirically for suspected pulmonary embolism with therapeutic low molecular weight heparin.

During her prolonged hospital stay (over three weeks), dermatology, obstetric, infectious disease, and respiratory teams were involved. TB prophylaxis was initiated following latent TB re-evaluation. Her condition gradually improved with tapering steroids and continued antibiotic therapy.

At 35+4 weeks, she presented in spontaneous preterm labour and was given IV hydrocortisone intrapartum due to recent prolonged steroid use. She delivered a healthy baby via uncomplicated vaginal birth.

Postnatal recovery was uneventful.



Diagnosis

Diagnosing eczema in pregnancy involves a combination of **clinical history**, **physical examination**, and **select investigations** to rule out complications and alternative causes of rash in pregnancy.

Clinical Assessment

- History:
 - Personal or family history of atopy (eczema, asthma, allergic rhinitis)
 - Itch as a primary symptom
 - Chronicity or recurrent flares
 - Response to emollients or steroids
- Symptoms:
 - Intense pruritus
 - Dry, red, inflamed, or lichenified patches
 - Common sites: flexural areas, hands, face, neck, trunk

Physical Examination

- Symmetrical distribution of lesions
- Signs of infection (crusting, oozing, swelling)
- Evidence of scratching (excoriations)
- Generalized or localized rash

Investigations

- Skin swabs:
 - Indicated if superinfection is suspected
 - Most common pathogen: *Staphylococcus aureus*
- Blood tests:
 - Elevated C-reactive protein (CRP) in infection or inflammation
 - Eosinophilia in atopic disease
 - Low albumin in extensive disease or poor nutrition
- Culture and Sensitivity:
 - From skin swabs or blood in systemic symptoms
- Imaging:
 - If signs of systemic illness (e.g., dyspnea, hypoxia), consider **chest X-ray or CTPA** to rule out pneumonia or pulmonary embolism

Rarely needed during pregnancy unless the diagnosis is unclear or unusual features present

Differentials to Consider

- Especially important in pregnancy as other dermatoses can mimic or co-exist:
- Polymorphic eruption of pregnancy (PEP)
- Pemphigoid gestationis
- Intrahepatic cholestasis of pregnancy (ICP) – rule out if intense pruritus without visible rash
- Psoriasis or eczema herpeticum

Management

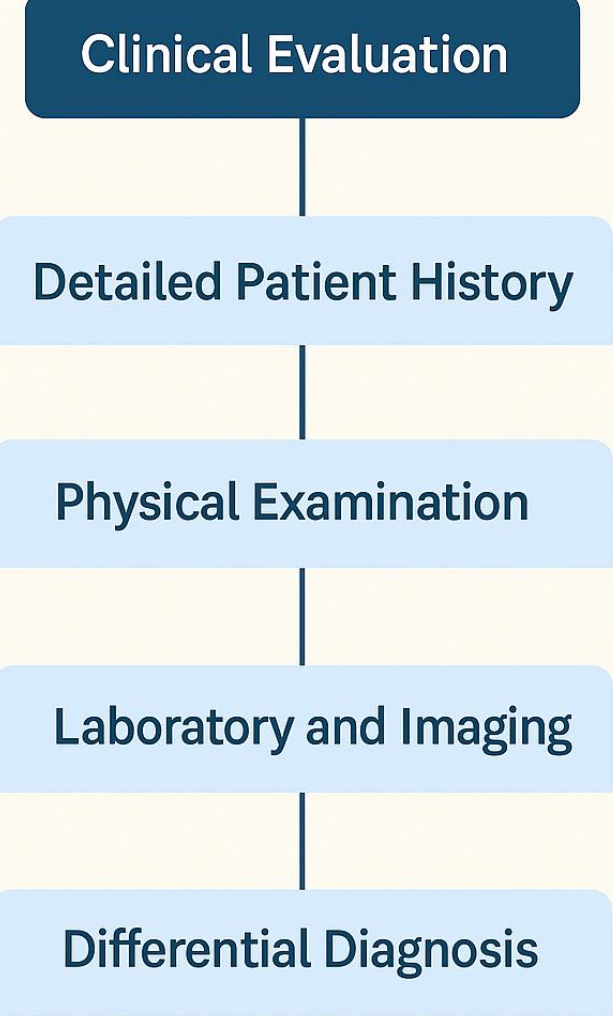
General Principles:

- Emphasize non-pharmacological management first.
- Monitor maternal and fetal well-being.
- Provide psychological support and patient education.

Topical Therapy:

- Emollients: First-line treatment; apply liberally and frequently.
- Topical corticosteroids:
 - Low- to moderate-potency preferred.
 - Use high-potency only for short durations under supervision.
- Topical antibiotics (e.g., fusidic acid): For localized infection; short-term use only.

Diagnosis of Eczema in Pregnancy



Systemic Therapy:

- Oral corticosteroids (e.g., prednisolone):
 - For moderate to severe flares.
 - Use minimum effective dose.
 - Taper gradually to avoid adrenal suppression.
- Antibiotics:
 - For secondary bacterial infection or sepsis.
- Antihistamines:
 - For itch relief.

Intrapartum and Postpartum Care:

- IV hydrocortisone during labour if patient was on long-term steroids.
- Safe to breastfeed while using most topical therapies.
- Monitor for infant skin contact with topical steroids.

Multidisciplinary Approach:

- Dermatology: For flare management and infection.
- Obstetrics: Fetal monitoring and birth planning.
- Infectious disease: For systemic infection or antibiotic selection.
- Respiratory/medical team: If complications like PE arise.
- Mental health support: Address anxiety, steroid phobia, or past trauma.

Patient Education:

- Reassure regarding safety of emollients and topical steroids.
- Encourage adherence to treatment.
- Discuss signs of worsening or infection requiring urgent care

Conclusion

This case emphasizes the importance of multi-disciplinary care in cases of complicated eczema in pregnancy. In addition to, importance of steroid cover during labour to avoid steroid crisis. Future research should explore standardized protocols for managing complex eczema cases in pregnancy to improve maternal and fetal outcomes. Additionally, enhanced awareness and education among healthcare providers can inform better clinical practice and policy development for addressing high-risk dermatological conditions in pregnancy.

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Eczema in Pregnancy Management

