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IMAGE QUIZ

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Itchy Rash in Pregnancy

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ANSWER TO JCHS-IQ-01-2022

Pruritic urticarial papules and plaques of pregnancy (PUPPP).

Discussion

The other pruritic rash in pregnancy that is similar in features to PUPPP is Pemphigoid Gestationis (PG). Intrahepatic cholestasis of pregnancy is another important pruritic condition not to be missed. Other common pruritic dermatoses such as drug eruptions, atopic dermatitis, contact allergic dermatitis or viral exanthem must also be considered.

PUPPP is a rash that usually occurs in the last weeks of the third trimester of pregnancy or in the immediate postpartum period. The rash usually occurs in situations where there is rapid excessive stretching of the skin such as with a first pregnancy or multiple gestations pregnancy. This is because the rapid stretching of the skin causes damage to the connective tissue and triggering an inflammatory reaction. PUPPP usually starts at the striae distensae on the abdomen and spread out to the extremities. It starts off as papules and later form into plaques. It usually spares the periumbilical area, palms, and soles [1-3]. PUPPP is a clinical diagnosis. Skin biopsy and direct immunofluorescence does not reveal any significant changes [2,3]. The prognosis of PUPPP is good with no maternal or foetal consequences. The duration for PUPPP is around 4 - 6 weeks and does not recur in subsequent pregnancies [2].

Pemphigoid gestationis (PG) is a rare autoimmune disorder that occurs during pregnancy. It is caused by antibodies binding to the basement membrane of the epidermis causing formation of vesicles and blisters. It occurs earlier at the second or third trimester. Unlike PUPPP rash, PG usually starts at the umbilical region and spreads to the extremities [1-5]. The lesions can occur on the palms and soles but spare the face and mucous membrane [2, 3, 5]. It begins as papules and plaques, and will rapidly form large tense blisters [2, 3, 5]. Skin biopsy will show sub epidermal blistering. Diagnosis is confirmed with direct immunofluorescence of the biopsy which will reveal antibodies. PG usually remits before delivery with some patients having flares in the postpartum period. PG has the tendency to recur in future pregnancies and in more severe form. There is a slight increase in prevalence of premature delivery and low birth weight infants that is associated with PG [2-5].

Patients with intrahepatic cholestasis in pregnancy (ICP) presents with severe generalised pruritus worst on the palms and soles. However, this condition does not have any primary skin changes apart from excoriations from scratching. ICP is characterised by intense pruritus and increased serum bile acid level beginning from the late second and/or third trimester and rapidly resolving after delivery. ICP is a diagnosis that cannot be missed since it carries foetal complications such as prematurity, meconium-stained amniotic fluid, intrauterine demise, and an increased risk for neonatal respiratory distress syndrome [6]. However, despite the intense pruritus, this case presented with a rash which made ICP less likely.

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Other common differential diagnoses which are important to be considered such as drug eruptions, atopic dermatitis, contact allergic dermatitis or viral exanthem can be excluded in this case since there were no relevant history.

It is easy to be confused between PUPPP and PG during early manifestation. In this case, there were many points that made it more likely to be PUPPP as compared to PG. It was a multiple pregnancy and the rash occurred in the final trimester. The rash also started at the striae distensae area on the abdomen and not at the periumbilical region. The rash comprised of papules and plaques with no vesicles or blisters. However, in cases where it is difficult to differentiate between these two rashes, it is advised to perform skin biopsy [2-3,5].

PUPPP main aim of management is symptomatic relief of the itchiness. First line of treatment is high potency (class 1-4) topical corticosteroids. First generation of antihistamines is safe in pregnancy and can be used in adjunct. Short course of systemic steroids can be given for severe disease. In mild cases, soothing moisturizer or aqueous ointment may be applied topically. Patients can also be advised on general measures such as cool baths, application of emollients and wearing cotton clothing [1-3].

Learning Points

- The importance of recognising and managing PUPPP rash.
- The importance of differentiating PUPPP with PG rash is that the latter carries some foetal risk.

Conflict of Interest

Authors declare none.

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