

South Australian Paediatric Clinical Guidelines

Pruritic urticarial papules and plaques of pregnancy (PUPPP)

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Pruritic urticarial papules and plaques of pregnancy (PUPPP)

- > Pruritic urticarial papules and plaques of pregnancy (PUPPP) is also known as polymorphic eruption of pregnancy, Bourne's toxæmic rash of pregnancy, toxæmic erythema of pregnancy, and late onset prurigo of pregnancy (Kroumpouzou and Cohen 2003)
- > PUPPP is the most common pregnancy related dermatoses and the rash usually resolves before or within several weeks of birth (Rapini 2004).
- > PUPPP is poorly defined because of its variable clinical presentation, lack of pathognomonic diagnostic features and lack of laboratory abnormalities.
- > The main hypothesis is that rapid abdominal wall distention may cause damage to connective tissue in the striae with subsequent conversion of nonantigenic molecules to antigenic ones, thus triggering an inflammatory process (Kroumpouzou and Cohen 2003)
- > Recurrence in subsequent pregnancies, with menses or oral contraceptives is uncommon

Clinical features

- > Occurs predominantly in primigravidas late in the third trimester (exceptionally postpartum)
- > Associated with multiple gestation (possibly due to excessive abdominal distention and higher progesterone levels)
- > Lesions (pruritic papules) commonly begin in the abdominal striae with periumbilical sparing
- > Erythematous urticarial papules and plaques may spread to the proximal thighs, buttocks and proximal arms
- > Small vesicles may occasionally be noted
- > Itching is severe in 80 % of cases
- > Usually does not affect the face, palms, or soles.
- > Excoriations are rarely found

Incidence

- > Between 1 in 130 pregnancies and 1 in 300 pregnancies
- > More common in multiple pregnancy (7 in 200) (Elling et al. 2000)

Pathogenesis

- > No immunologic or hormonal abnormalities have been found
- > One recent study reported a decrease in serum cortisol (Vaughan Jones et al. 1999)
- > Fetal DNA has been identified in the skin of women with PUPPP, suggesting that microchimerism might be relevant in the pathogenesis of PUPPP

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Diagnosis

- > There is no diagnostic test for PUPPP
- > Consider referral to infectious diseases consultant or dermatologist

Exclude the following:

- > Obstetric cholestasis
- > Contact dermatitis (allergic or irritant)
- > Drug eruptions
- > Erythema multiforme
- > Herpes gestationis (immunofluorescence or viral culture)
- > Insect bites
- > Scabies (skin scrapings)
- > Sea bather's eruption
- > Urticaria (acute or chronic)

Treatment

- > Symptomatic: Oral cetirizine [Zyrtec®] and topically - betamethasone 0.02 % [Celestone M® cream] or similar
- > Rarely, a short course of oral prednisolone may be necessary

References

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4. Vaughan Jones SA, Hern S, Nelson-Piercy C, Seed PT, Black MM. A prospective study of 200 women with dermatoses of pregnancy correlating clinical findings with hormonal and immunopathological profiles. Br J Dermatol 1999; 141: 71-81 (Level III-2)
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