Pruritus of the Breast in Pregnancy: Recognizing Benign and Malignant Causes of Itch

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Background: Pruritus is among the most common and clinically consequential symptoms of pregnancy, and the breast is a frequent and underappreciated site of involvement. During pregnancy the breast undergoes more dramatic structural change than any other organ, with hormonally driven ductal-lobular proliferation, hypervascularity, and rapid volume expansion producing mechanical stretch of the overlying skin. This dynamic cutaneous environment can give rise to a range of pruritic conditions including benign itch, pruritic dermatoses, and pruritic presentations of malignancy. Because the majority of breast itch is benign and self-limited, clinicians risk both over-investigating physiologic change and, more dangerously, dismissing itch that indicates fetal risk or malignancy.

Methods: A narrative review of the literature regarding clinical practice guidelines, systematic reviews, and other relevant studies addressing pruritus and dermatoses of the breast during pregnancy. Additional references were identified through review of the bibliographies of relevant articles and review papers. The literature was synthesized across five diagnostic categories: physiologic changes, pregnancy-specific dermatoses, preexisting inflammatory disease, secondary infection, and malignant mimics, with emphasis on pruritus as the unifying clinical symptom.

Results: The pruritic pregnancy-specific dermatoses stratify by fetal risk: atopic eruption of pregnancy (AEP) (the most common counting for over 50% of cases, and most likely to involve the nipple-areolar complex) and polymorphic eruption of pregnancy (PEP) carry no fetal risk, whereas pemphigoid gestationis (PG) and intrahepatic cholestasis of pregnancy (ICP) do. ICP is distinctive as the only pregnancy dermatosis presenting with severe generalized pruritus and no primary lesions and diagnosis rests on elevated serum bile acids (>10 μmol/L). Stillbirth risk rises sharply at levels ≥100 μmol/L, for which delivery at 36 weeks is recommended. PEP and PG can mimic one another, but periumbilical sparing and negative direct immunofluorescence distinguish PEP, while positive DIF or ELISA for BP180 confirms PG. It is important to note that absence of bullae does not exclude PG. The Th2-dominant immune shift of pregnancy tends to worsen pruritic atopic disease, and nipple-areolar eczema is the characteristic atopic pattern on the breast. On the nipple-areolar complex and inframammary fold, the itch-scratch cycle impairs the epidermal barrier, predisposing the skin to secondary infection with S. aureus, scabies, or eczema herpeticum, each of which can obscure the underlying diagnosis, and low-risk bedside testing should be used liberally. Critically, unilateral, persistent, or treatment-resistant pruritus of the nipple-areolar complex may represent Paget disease rather than benign eczema and

warrants biopsy. It is important that itch is not presumed to be benign solely because a patient is pregnant.

Conclusions: Breast pruritus in pregnancy spans a spectrum from benign dermatoses to malignancies that may be life-threatening for the mother or the fetus. Distribution, laterality, primary versus secondary lesions, and treatment response, should all be taken into account. Serum bile acids should be immediately tested for in cases of generalized lesionless itch and atypical unilateral nipple itch should always be biopsied.This will enable timely diagnosis while avoiding unnecessary intervention, optimizing outcomes for both mother and child.