CASE REPORT

Successfully Treated Case of Pemphigoid Gestationis with Post-Partum Intravenous and Oral Steroids

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Introduction

Pemphigoid gestationis (PG) is a rare autoimmune blistering disease of pregnancy. PG has an estimated prevalence of 1 case in 50,000–60,000 pregnancies. It is characterized by pruritic, urticarial plaques with the development of tense vesicles and bullae within the lesions. PG has been associated with premature delivery, small-for-gestational-age infants. Recurrences with subsequent pregnancies are often more severe. Oral glucocorticoids are the mainstay of therapy. Differentiation of PG from pruritic urticarial papules and plaques of pregnancy is essential because management and outcomes differ. In instances in which clinical diagnosis is difficult, direct immunofluorescence tests, immunoblots, or ELISA studies of anti-basement membrane zone antibodies are useful in establishing the diagnosis. Signs and symptoms of the disorder typically present during the second or third trimester of pregnancy, but may occur at any time during the pregnancy or anywhere up to six weeks after giving birth. Most patients develop antibodies against 2 hemidesmosomal proteins, BP180 (BPAG2, collagen XVII) and less frequently

BP230 [1]. The trigger for the development of autoantibodies in persons with PG remains elusive. Cross-reactivity between placental tissue and skin has been proposed to play a role. PG has a strong association with HLA-DR3 (61–80 %) and HLA-DR4 (52 %), or both (43–50 %), and virtually all patients with a history of PG have demonstrable anti-HLA antibodies. The placenta is known to be the main source of disparate (paternal) antibodies and can thus present an immunologic target during gestation.

Case

A 33-year-old woman presented at 38 weeks of her second pregnancy with preterm rupture of membranes and breech (footling) presentation in labor. During pre-operative assessment, she was noted to have multiple excoriations and hyperpigmented lesions over both her arms and feet with pruritus. She was taken for an emergency cesarean and a live female baby was extracted with the birth weight of 2.8 kg without any skin lesions. During the post-partum period on the first post-op day, the patient developed multiple tense polysized bullae/vesicles and bilaterally symmetrical lesions over an erythematous base over the dorsum of her foot extending up to the lower 1/3rd of the lower limbs, anterior aspect of the thigh, abdomen, and both hands (Fig. 1). A skin biopsy and a Direct Immunofluorescence test (DIF) were ordered. Direct immunofluorescence showed positive linear staining of C3 in the basement membrane zone (Fig. 2). This was negative for IgG, IgM,

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IgA, & C19. Histopathology revealed epidermal spongiosis, upper dermal edema, superficial perivascular lymphohistiocytic infiltrate, and the presence of moderate eosinophils in the dermis and epidermis. A diagnosis of PG was made. She was commenced on IV dexamethasone 4 mg 12 h for an initial 7 days followed by oral prednisolone up to 0.6 mg/kg day. Her oral prednisolone was weaned down to 10 mg/day. Her pruritus was relieved by 15 days of steroid therapy. During the course of the steroid therapy, she developed suture site infection by the 16th post-op day in view of delayed healing on account of being on steroid therapy. The suture was opened and the sterile pus drained and under preview of daily dressing and oral antibiotic cover, the wound was allowed to heal by secondary intention. She successfully breast fed her neonate without any problems. Her medical history included one delivery 9 years ago. With her first pregnancy, the patient reported a similar but milder pruritic eruption that began mid-pregnancy and ended after she delivered a healthy, asymptomatic female infant, who weighed 2.7 kg at term. During the present post-partum period, the patient suffered perimenstrual flares. This continued for up to a month before she was successfully weaned off prednisolone (Fig. 3).

Discussion

Pemphigoid gestationis, also known as herpes gestationis, is an autoimmune bullous disorder that affects pregnant women. Some recalcitrant cases are resistant to high dose corticosteroids. Most of the cases present during the 2nd and 3rd trimesters. Up to a quarter of the cases present in the immediate post-partum period, as happened in our case. The usual clinical findings are multiple pruritic urticarial papules and plaques with or without the evidence of vesicles. The annular appearance of the lesions can be very striking. The periumbilical region is typically affected and

the lesions can become widespread affecting the rest of the trunk and limbs. The face and mucous membranes are usually spared. In 75 % of the cases, a relative remission may occur in the last weeks of pregnancy, which is followed by a post-partum flare. Flares also have been observed pre-menses and with the use of oral contraceptives. There is a tendency for PG to recur with subsequent pregnancies, during which there may be an earlier onset and a more severe course; however, skip pregnancies have been reported in 5–8 % of cases [2, 3]. Because PG is regarded as a unique entity of immunobullous disease occurring during pregnancy, its management is more difficult because of concerns over the use of systemic therapy during the ante-partum period.

There have been case reports of PG that persisted for years after delivery, in which the diagnoses of chronic PG or conversion to bullous pemphigoid must be considered [4]. Mild cases of PG may respond to potent topical steroids and antihistamines. Most cases end up requiring systemic treatment. Systemic corticosteroids remain the first-line treatment, usually with oral prednisolone 0.5 mg/kg day. This is regarded to be safe, but a few adverse effects of systemic corticosteroids are possible, including the risk of still birth, spontaneous abortion, and fetal hypothalamic–pituitary–adrenal axis suppression. The teratogenicity (mainly orofacial abnormalities) of systemic corticosteroids seen in animal models has been reported, but it remained controversial in studies of human beings.

Pemphigoid gestationis has been reported to develop in association with other autoimmune diseases as well as with trophoblastic tumors, hydatiform moles, and choriocarcinoma [5]. It is important to distinguish PG from pruritic urticarial papules and plaques of pregnancy (PUPPP), which can resemble non-bullous PG clinically and

Fig. 1 Lesions on *forearms* pre-treatment with parenteral steroids

Fig. 2 Direct immunofluorescence showed positive linear staining of C3 in the basement membrane zone

Fig. 3 Healed lesions over forearms and legs after 4 weeks of oral steroids

histopathologically [6]. In contrast to PG, PUPPP affects women in their first pregnancy during the third trimester as urticarial papules and plaques that arise within the striae distensae and spare the periumbilical area. Unlike PG, PUPPP does not tend to recur in subsequent pregnancies nor is there a risk of adverse fetal effects with PUPPP. Differentiation between the PG and PUPPP may be confirmed by the presence of anti-basement membrane zone antibodies by the immunofluorescence study, immunoblots, or ELISA study [1].

Potent topical glucocorticoids, oral glucocorticoids, and oral antihistamines are the standard medications that are used to treat PG during pregnancy. However, plasmapheresis [7] and immunophoresis [8] have also been used during pregnancy. In the post-partum period, topical and oral glucocorticoids continue to be the treatments of choice. However, other treatments that have been tried in isolated cases include tetracyclines with or without nicotinamide, cyclophosphamide, plasmapheresis, intravenous immunoglobulin, rituximab, and goserelin [1].

Conclusion

Pemphigoid gestationis is a rare autoimmune blistering disease of pregnancy. It is regarded as a unique entity of immunobullous disease and the mainstay of its management is steroid therapy, oral or intravenous, either during ante-partum or post-partum treatment. Our case was successfully treated with the initial use of IV corticosteroid therapy followed by oral steroids duly tapered, taking account of the perimenstrual flares, and weaned off over 6 weeks. Medium to high doses of corticosteroids increase the risks of pregnancy complications such as gestational diabetes, the premature rupture of membranes, infection, hypertension, and osteoporosis. This case report demonstrated that with early diagnosis followed by prompt treatment with steroid therapy, PG can be managed effectively and satisfactorily without any use of intravenous immunoglobulins, plasmapheresis, or newer modalities.

References

1. Ambros-Rudolph CM, Müllegger RR, Vaughan-Jones SA, et al. The specific dermatoses of pregnancy revisited and reclassified: results of a retrospective two-center study on 505 pregnant patients. *J Am Acad Dermatol.* 2006;54:395.
2. Semkova K, Black M. Pemphigoid gestationis: current insights into pathogenesis and treatment. *Eur J Obstet Gynecol Reprod Biol.* 2009;145:138–44.
3. Jenkins RE, Hern S, Black MM. Clinical features and management of 87 patients with pemphigoid gestationis. *Clin Exp Dermatol.* 1999;24(4):255–9.
4. Amato L, Mai S, Gallerani I, et al. A case of chronic herpes gestationis: persistent disease or conversion to bullous pemphigoid? *J Am Acad Dermatol.* 2003;49:302–7.
5. Shornick JK, Black MM. Secondary autoimmune diseases in herpes gestationis (pemphigoid gestationis). *J Am Acad Dermatol.* 1992;26:563–6.
6. Powell AM, Sakuma-Oyama Y, Oyama N, et al. Usefulness of BP180 NC16a enzyme-linked immunosorbent assay in the serodiagnosis of pemphigoid gestationis and in differentiating between pemphigoid gestationis and pruritic urticarial papules and plaques of pregnancy. *Arch Dermatol.* 2005;141:705–10.
7. Van de Wiel A, Hart HC, Flinterman J, et al. Plasma exchange in herpes gestationis. *Br Med J.* 1980;281:1041–2.
8. Wohrl S, Geusau A, Karlhofer F, et al. Pemphigoid gestationis: treatment with immunophoresis. *J Dtsch Dermatol Ges.* 2003; 1:126.