A resistant case of pemphigus gestationis successfully treated with cyclosporine

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(Received: July 5, 2015; Revised manuscript received: December 4, 2015; Accepted: December 4, 2015)

Abstract: Pemphigoid gestationis (PG) is a rare autoimmune blistering disease of pregnancy caused by antibasement membrane zone autoantibodies. The usual clinical findings are multiple pruritic urticarial papules and plaques, target lesions, vesicles, and blisters that occur during the second and third trimesters of pregnancy or in the immediate postpartum period. The disease is often treated with topical corticosteroids and oral antihistaminics. In more severe cases, systemic corticosteroids are needed. Herein, we report a case of resistant PG that responded to treatment with cyclosporine.

Keywords: pemphigus gestationis, resistant, cyclosporine

Introduction

Pemphigoid gestationis (PG), also called “herpes gestationis,” is a rare autoimmune blistering disease of pregnancy caused by antibasement membrane zone autoantibodies. The pathologic mechanism is suggestively a local allogenic autoimmune reaction against collagen XVII (BP180) in the placenta and, thus, a crossreaction with collagen XVII in the maternal cutaneous basement membrane [1]. The usual clinical findings are multiple pruritic urticarial papules and plaques, target lesions, vesicles, and blisters that occur during the second and third trimesters of pregnancy or in the immediate postpartum period. The diagnosis is based on a positive direct immunofluorescence analysis of a perilesional skin biopsy, and elevated BP180 antibody levels parallel disease activity [2]. The disease is often treated with topical corticosteroids and oral antihistaminics. In more severe cases, systemic corticosteroids are needed. In cases unresponsive to conventional therapy, other immunosuppressive medications (i.e., cyclosporine, azathioprine), intravenous immunoglobulin, and plasmapheresis have been used. Herein, we report a case of resistant PG that responded to treatment with cyclosporine.

Case report

A 26-year-old primigravida woman at 26 + 2 weeks gestation presented at our clinic with widespread, pruritic skin symptoms that had started 2 weeks earlier. The lesions initially presented on the legs and spread to the abdomen, arms, and back. No facial or mucous membrane involvement was appreciated. The patient was referred to the dermatology polyclinic, where examination showed erythematous macules scattered over the arms, legs, trunk, and neck, some with burst and crusted tense blisters on them (Fig. 1). Given the pre-
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A presumptive diagnosis of pemphigoid gestationis was appointed. Biopsies for H&E and immunofluorescence were taken. H&E revealed a subepidermal blistering dermatosis with perivascular and interstitial infiltrates of eosinophils and lymphocytes. Direct immunofluorescence demonstrated linear deposits of complement component C3 along the basement membrane zone (Fig. 2). A diagnosis of PG was made from these findings. Oral prednisolone combined with hydroxyzine and a topical glucocorticoids was started. After a week, the prednisolone dose was increased since blistering continued, and at gestational week (gw) 30 + 1, she was hospitalized with oral cyclosporine (300 mg/day) medication. Disease control was achieved, and after 4 weeks without flaring, cyclosporine and prednisolone were tapered (Fig. 3).

Fetal growth restriction was detected prenatally, and at gw 38 + 1, labor was induced. The patient gave birth to a live baby measuring 2785 g in weight through vaginal delivery. No abnormality was detected at the new-birth.
born examination. The patient decided to discontinue the cyclosporine therapy immediately after the delivery and remained on prednisolone monotherapy. Treatment was maintained until a 3-month after delivery, and the patient had no recurrences during a 6-month follow-up period.

Discussion

Pemphigoid gestationis (PG) was first described in 1872 under the name “herpes gestationis” [3]. This was an elegant initial description that encompassed both the morphology of the skin lesion and the state of the patient in which the eruption occurred. Later, with advances in virology and immunologic classification, the pathological similarities between bullous pemphigoid and herpes gestationis became clearer, prompting the transition in nomenclature to pemphigoid gestationis [4].

PG commonly occurs during the second or third trimester of pregnancy. While most cases spontaneously resolve after pregnancy, symptoms may continue into the postpartum period. Fetal prognosis is good, but early onset in 2nd trimester and blister formation are risk factors for prematurity and low birth weight. Rarely, the newborn may be affected by very transitory blisters [5].

The diagnosis of pemphigoid gestationis often involves biopsy and direct immunofluorescence studies, which may aid in distinguishing pemphigoid gestationis from other dermatoses of pregnancy. Histopathology classically demonstrates a subepidermal blistering process. The cleavage along the basement membrane zone is accompanied by extensive papillary dermal edema and a perivascular infiltrate composed of eosinophils, lymphocytes, and histiocytes. Eosinophils may line the dermal–epidermal junction and are frequently observed within the blister cavity. Linear deposition of C3 along the basement membrane zone in perilesional skin is diagnostic [4].

The aim of the treatment is to suppress the excessive itching and to prevent formation of new blisters. When choosing a treatment, the benefit of the medication to the mother is critically weighed up against possible risks to the fetus. Most PG patients can be successfully treated with topical and oral glucocorticoids, which are considered relatively safe during pregnancy. Severe PG cases with immunosuppressive medication are sparse, and the benefit to the mother needs to be weighed against possible risks to the fetus and the newborn [6].

Prenatal treatment with cyclosporine combined to prednisolone has been reported in four cases with good treatment response, and in one case, cyclosporine was used after intravenous immunoglobulin in persistent postnatal PG [6–8]. Our patients were treated with cyclosporine (300 mg/day) and prednisolone. Cyclosporine was well tolerated by the present patients.

Conclusion

In conclusion, cyclosporine treatment can be considered antenatally when treating severe and persistent PG unresponsive to topical and systemic glucocorticoids.

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Funding sources: None.

Authors’ contribution: Concept, Design, Analysis and/or Interpretation, Literature Search and Writing: OO; Supervision and Resource: OO; Materials: VA, BUI; Critical Reviews: CRA. The paper has been checked over and approved by all authors.

Conflict of interest: The authors do not have any conflict of interest.

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