Case Report ISSN 2768-6647

Medical and Clinical Case Reports

Gestational Pemphigus : A Case Report

Soukaina SABIR*, Zineb SAMI, Nabila YOUSSOUF, Safia GMIH, M Jalal, A Lamrissi and S Bouhya

Service of maternity CHU IBN ROCHD.

***Correspondence:**
Soukaina SABIR, Service of maternity CHU IBN ROCHD.

Received: 25 Apr 2022; **Accepted:** 26 May 2022; **Published:** 30 May 2022

Citation: SABIR S, SAMI Z, YOUSSOUF N, et al. Gestational Pemphigus : A Case Report. Med Clin Case Rep. 2022; 2(2): 1-4.

ABSTRACT

Pregnancy-associated dermatoses represent a heterogeneous group with variable expression, ranging from pathologies with simple aesthetic impact to those with a pejorative prognosis. The occurrence of pemphigus during pregnancy is exceptional. The diagnosis is generally easy and is based on the clinic, histology and direct and indirect immunofluorescence. No clinico-biological particularity is observed during this association, but the occurrence of maternal-fetal complications makes it all the more serious. The treatment is mainly based on corticosteroid therapy, plasmapheresis as well as intravenous immunoglobulins. We report the case of a patient37 years old, married and mother of 3 living vaginally who consults for spots erythemato-papular lesions, vesicular in places associated with lesions in rosette and pseudo-rosette occupying the abdomen without respecting the periumbilical region, the limbs generalized lower arms and forearms occurring in the third trimester in a presumed unmonitored pregnancy at 36 weeks of amenorrhea and 3 days and whose skin biopsy wasin favor of a pemphigoid.

Keywords

Gestationalpemphigus,Autoimmunedisease,Immunofluorescence.

Introduction

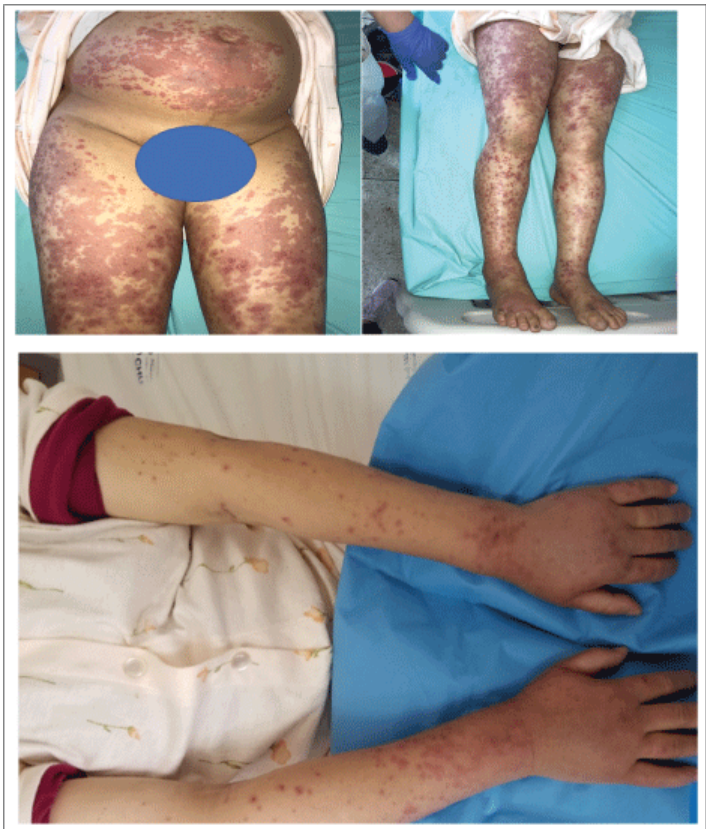
Gestational pemphigoid (PG) formerly known as herpes gestationis belongs to a group of autoimmune skin diseases that cause blistering of the mucous membrane and skin, it is a rare condition that occurs during pregnancy [1,2]. Its reported incidence was between 0.5 and 2 cases among millions of people in France, Kuwait and Germany [1,2]. The pathogenesis is not yet fully established, but it belongs to the group of autoimmune skin conditions characterized by an immune response directed against different hemidesmosomal proteins affecting the adhesion between the dermis and the epidermis causing skin blisters and mucous membranes [3]. Described since 1872, under the name of herpes gestationis,

The manifestation of severe pruritus is followed by the appearance of erythematous and urticarial papules and plaques which come to form vesicles and blisters. The lesions usually appear on the abdomen and then spread peripherally; however, the face, mucous membranes, palms and soles of the feet are usually spared [1,2].

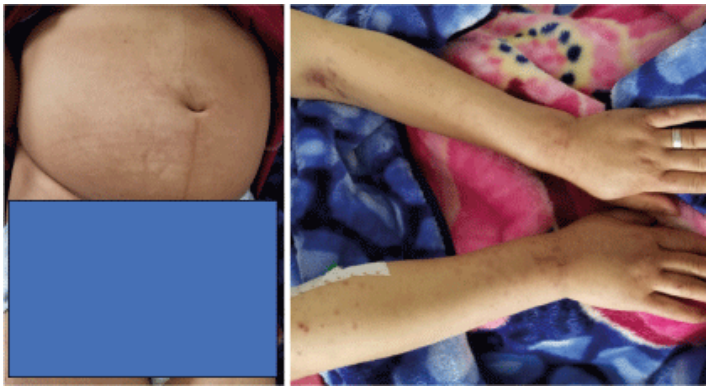
Observation

Mrs. HE, 37 years old, married and mother of 3 children living vaginally with ATCD from thyroidectomy 4 years ago for multiheteronodular goiter (under Levothyrox 150ug) admitted to 36 weeks + 3 days for skin lesions associated withsevere pruritus. The clinical examination on admission noted a patient in fairly good general condition with spots of erythemato-papular, vesicular lesions in places associated with lesions in rosette and pseudo-rosette occupying the abdomen without respecting the periumbilical region, the limbs accentuated generalized lower arms and forearms. The patient reported the appearance of these lesions following ainsomnia pruritus.The dermatological examination objectified erythemato-papular lesions, vesicular in places associated with lesions in rosette and pseudo rosette occupying the abdomen without respecting the periumbilical region, the lower limbs uncircumferentially and the forearms with petechial lesions, without ulceration , without necrosis (Figures 1, 2 and 3) without damage to the skin appendages;the face, mucous membranes, palms and soles of the feet were sparedThe obstetric examination was unremarkable with an obstetric ultrasound corresponding to the term and a recording of the fetal heart rate without abnormalities. An opinion of dermatology, internal medicine, and hematology were requested. The initial assessment showed cytolysis with AST at 54UI/L and ALAT at 51UI/L, CRP at 26mg/L and TSH at 12.78

mIU/L. Hepatic, HIV, TPHA/VDRL serologies were negative. An abdominal ultrasound showed a digestive parietal thickening of some jejunal loops, looking inflammatory. The skin biopsy was performed. Sheshowed edema of the papillary dermis associated with a lymphohistiocytic infiltrate rich in eosinophils. Bubbles under epidermal were highlighted, the IFD was positive in favor of a pemphigoid. Awaiting the result of the skin biopsy, the patient was put on colchicine 1mg, antihistamine, vitamin C and oral and local corticosteroid therapy with good clinical remission (Figures 3 and 4).



Figures 1 and 2: lesions erythemato-papular, vesicular lesions in places associated with cockade and pseudo-cockade lesions occupying the abdomen without respecting the periumbilical region, lower limbs and generalized forearms.



Figures 3 and 4: Clinical improvement under treatment.

Discussion

It is a rare pregnancy-associated autoimmune skin disease that is immunologically and clinically similar to the pemphigoid group of blistering autoimmune skin diseases. The pathogenesis is not yet fully established, but an immune response directed against different hemidesmosomal proteins affecting the adhesion between the dermis and the epidermis causing blistering of the skin and mucous membranes has been described [3]. Unlike polymorphic dermatosis of pregnancy and atopic dermatitis of pregnancy, gestational pemphigoid is a dermatosis specific to pregnancy which remains exceptional with an estimated prevalence of 1/50,000 pregnancies [6,7]. It most often occurs in the second or third trimester of pregnancy in multiparas.

The disease has a worldwide distribution [8] and no ethnicity difference has been described [13]. The median age of affected women varies between 17 and 41 years.It most often occurs in multiparas [9], as in the case of our patient. PG can appear for the first time during any pregnancy, but most often the onset occurs during the first three pregnancies (63 to 75% of cases), it often appears during the second or third trimester of gestation. [9,10]. For our patient, the onset was in the third trimester.

These multiparous are HLA DR3 or DR4 carriers. It is due to the production of anti-BP 180 autoantibodies (hemidesmosomal transmembrane protein) as a result of the breakdown of mother-fetus tolerance [11].

The pathogenesis of PG relates to circulating antibodies directed against the basement membrane of a specific antigen shared between the skin and the placenta resulting in tissue damage and blistering. The antigen is collagen XVII, formerly known as BP-180 or bullous pemphigoid antigen 2 which acts as an autoantigen in other vesicular diseases. Collagen XVII is a transmembrane protein which is part of the hemidesmosomic complex of the dermo-epidermal, junction which is between the epidermis and the dermis [12]. The autoantibodies are directed against the NC16A region of collagen XVII. These antibodies bind to both the amniotic chorionic epithelium and the basement membrane area of the skin [13].

Clinically, PG begins with an insomnia pruritus followed by the appearance of lesions [9]. Pruritus may remain the only symptom, but it mainly develops into rash polymorphic skin lesions confluent maculo-papular patches sometimes circinated in 2 to 4 weeks, these plaques will be covered with vesicles and/or bubbles which can give a target or cockade appearance finally large tense bubbles on an erythematous background [10,11,14]. More rarely, pustular lesions can be observed [9]. The face and mucous membranes are traditionally respected [14]. Skin lesions usually develop on the abdomen, characteristically involving the umbilical region [8]. In 90% of cases, it later spreads to the rest of the abdomen as in our patient, and in some patients involvement of the thighs, palms and soles of the feet may be prominent [8].

The differential diagnosis is essentially posed with the polymorphous dermatosis of pregnancy which usually declares itself in the primiparous in the third trimester by a non-bullous urticarial eruption sparing the periumbilical region [7,15].

The histopathology of PG varies with severity and stage of disease. In the early pre-bullous stage, the classic histopathological findings are urticarial lesions characterized by edema of the upper and mid dermis with a perivascular infiltrate of lymphocytes, histiocytes and eosinophils. In the later stage, bullous subepidermal formations and bullae become evident [16]. These histopathological findings are not specific for PG and can also be seen in PEP (polymorphic eruption of pregnancy). Direct immunofluorescence demonstrates linear deposition of C3 (complement 3) and IgG autoantibodies at the dermal-epidermal junction [18]. C3 is reported in 100% of cases, while IgG is seen in 25-50 % of cases [8]. To avoid a skin biopsy, circulating autoantibodies can be detected using complement-binding tests, such as indirect immunofluorescence (IFI) or ELISA. IFI detects IgG antibodies targeting the basement membrane of the skin in 30-100% of cases [17]. The ELISA method would typically reveal circulating IgG antibodies against BP180, particularly against the NC16A domain of BP180. This test showed a specificity of 94% to 98% and a sensitivity of 86% to 97% in detecting BP180 antibodies in patients with PG (33.35) This method can also monitor disease activity because serum levels of anti-BP180 NC16A correlate with disease severity [8]. In a more recent study, routine immunohistochemistry showed linear C4d immunoreagent deposition along the basement membrane in 100% of patients with PG versus 0% in patients withPEP [18]. This method can be used to separate PG from other pregnancy-specific dermatoses such as PEP, intrahepatic cholestasis of pregnancy (ICP) and Atopic eruption of pregnancy (AEP) or other skin diseases [8].

Therapeutically, the less extensive forms of PG respond favorably to local corticosteroid therapy associated with antihistamines. As for severe forms, systemic corticosteroid therapy is indicated at a dose of 0.5 to 1 mg/kg/day. Disulone could be an interesting alternative [14].

If corticosteroids are used during pregnancy, calcium and vitamin D supplementation is advised. Even though prednisone barely crosses the placenta, there is a risk of preeclampsia, eclampsia and gestational diabetes [19]. After birth, the newborn should be monitored for adrenal insufficiency [13].
In rare cases, more aggressive immunosuppressive therapy may be needed to save the life of the mother or the fetus. A report of 15 cases demonstrated the efficacy of rituximab 1 gram administered at weeks gestation [13].

Except for the psychosocial impact of the pruritus, the maternal prognosis is good and the evolution is towards regression in a few weeks to a few months postpartum. Some cases of rapidly resolving flare-ups within a few days postpartum have been reported due to the rise in antibody levels [11].

In a study of 87 patients from the UK, the duration of active disease ranged from 2 weeks to12 yearspostpartum. The majority of patients were symptom-free after 6 months, with a disease duration of 28.4 weeks and a median duration of 16 weeks [8].

The fetal prognosis is marked by the risks of intrauterine growth retardation and prematurity justifying rigorous monitoring of fetal growth. Due to the transplacental passage of maternal antibodies, the elimination half-life of which is 15 days, there is a risk of transient neonatal bullous eruption encountered in less than 3% of cases [6,7].

Conclusion

PG is a rare autoimmune skin disease associated with blistering and exclusively with pregnancy. Pathophysiologically, it is similar to bullous pemphigoid observed in elderly patients.

Diagnosis is based on skin biopsy and/or serum screening for anti-BP180 antibodies. The maternal prognosis is good, the fetal prognosis is marked by the risk of hypotrophy and transient neonatal rash. Corticosteroid therapy is the cornerstone of treatment. The combination of corticosteroids and antihistamines was effective in improving maternal PG allowing normal delivery of a normal weight baby.

References

1. Al-Nugali, Samia Suliman, Aeshah Abdullah Almesfer. Pemphigoid gestations and successfultreatment: a case report. 2020.
2. Huilaja L, Mäkikallio K, Tasanen K. Gestationalpemphigoid. Orphanet J Rare Dis. 2014; 9: 136.
3. Enno Schmidt M, Zillikens D. Pemphigoiddiseases. Lancet. 2013; 381: 320-332.
4. Al-Fouzan AW, Galadari I, Oumeish I, et al. Herpes gestationis (Pemphigoidgestationis). ClinicsDermatol. 2006; 24: 109-112.
5. 5.Laugel V, Escande B, Donato L, et al. Pemphigoïde gravidique et lésions bulleuses chez le nouveau-né. Arch Pédiatr. 2001; 8: 1071-1074.
6. Ingen-Housz-OroPemphigoïde de la grossesse : revue de la littérature. Annales de dermatologie et de vénéréologie. 2011; 138: 209-213.
7. Soutou B, Aractingi S. Dermatoses de la grossesse. La revue de médecine interne. 2014; 4816: 7-11.
8. Sävervall, Christine, FrejaLærke Sand, et al. Pemphigoidgestationis: current perspectives." Clinical, cosmetic and investigationaldermatology. 2017 ; 10 : 441.
9. Mokni M, Fourati M, Karoui I, et al. Pemphigoïde gravidique étude de 20cas. Ann DermatolVénérol. 2004; 131: 953-956.
10. Schmutz JL. Dermatoses spécifiques de la grossesse. Press Med. 2003; 32: 1813-1817.
11. Hallaji Z, Mortazavi H, Ashtari S, et al. Pemphigoid

gestationis: clinical and histologic features of twenty-three patients. International journal of women's dermatology. 2017 ; 3: 86.

12. Yumi Aoyama, Kanako Asai, Kana Hioki, et al. Herpes Gestationis in a Mother and Newborn. Archives of Dermatology. 2007; 143: 1168-1172.
13. Cohen, Stephanie, Lindsay C. Strowd, et al. Pemphigoidgestationis: a case series and review of the literature. Journal of DermatologicalTreatment. 2018 ; 29: 815-818.
14. Al-Nugali, Samia Suliman, Aeshah Abdullah Almesfer. Pemphigoid gestations and successfultreatment: a case report. 2017.
15. Cadoret F, Lorenzini F, Parant O. Pemphigoïde de la grossesse et syndromede Turner; une association inhabituelle. Journal de Gynécologie Obstétrique et Biologie de la Reproduction. 2001.
16. Ambros-Rudolph CM. Dermatoses of pregnancy–clues to diagnosis, fetalrisk and therapy. Ann Dermatol. 2011; 23: 265-275.
17. Ambros-Rudolph CM, Mullegger RR, Vaughan-Jones SA, et al. The specific dermatoses of pregnancyrevisited and reclassified: results of a retrospectivetwo-center study on 505 pregnant patients. J Am Acad Dermatol. 2006 ; 54 : 395-404.
18. Kwon EJ, Ntiamoah P, Shulman KJ. The utility of C4d immunohistochemistry on formalin-fixedparaffin-embedded tissue in the distinction of polymorphiceruption of pregnancyfrompemphigoidgestationis. Am J Dermatopathol. 2013; 35 : 787-791.
19. Braunstein I, Werth V. Treatment of dermatologic connective tissue disease and autoimmuneblisteringdisorders in pregnancy. Dermatol Ther. 2013; 26: 354-363.