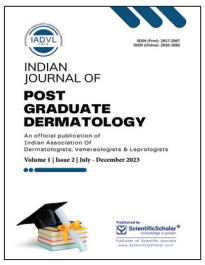
ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

https://ijpgderma.org

Indian Journal of Postgraduate Dermatology



Correspondence

Autoimmune Progesterone Dermatitis

Rajiv Sule[1], Monal Sadhwani[1], Tejaswini Salunke[1]

[1]Department of Dermatology, Deenanath Mangeshkar Hospital and Research Centre, Pune, Maharashtra, India.

***Corresponding author:**
Monal Sadhwani,
Department of Dermatology,
Deenanath Mangeshkar
Hospital and Research Centre,
Pune, Maharashtra, India.

monal181192@yahoo.co.in

Received: 09 February 2023
Accepted: 13 June 2023
EPub Ahead of Print: 15 July 2023
Published: 28 September 2023

DOI
10.25259/IJPGD_18_2023

Quick Response Code:

Dear Editor,

Autoimmune progesterone dermatitis is a rare disease where rash occurs cyclically in the luteal phase or late menstrual phase of the menstrual cycle. Autoimmune progesterone dermatitis can also present during pregnancy.[1]

A 37-year-old female farmer presented with a history of an extensive and pruritic rash on and off for 1 year. She had previously been treated with topical and oral steroids, antihistamines and antifungals, with temporary relief. She had three children, her menses were normal and there was no history of rash during pregnancy.

On examination, she had erythematous papulovesicular and urticarial lesions on extremities, trunk and back [Figure 1a and b]. At places the rash showed central clearing, and post-inflammatory hyperpigmentation was appreciated at few places. As she was a farmer, a diagnosis of contact dermatitis was considered first. Differential diagnoses of erythema annular centrifugum, dermatitis herpetiformis and urticaria were also considered.

Her haematological investigations and blood chemistry values were within normal limits. She was non-reactive for human immunodeficiency virus and venereal disease research laboratory (VDRL) testing. On histopathology, the epidermis showed spongiosis and dermis had lymphohistiocytic infiltrate with few eosinophils (low power Figure 2a and high power Figure 2b). The biopsy picture was suggestive of sub-acute dermatitis.

She was treated with tablet hydroxyzine hydrochloride 10 mg at bedtime and betamethasone valerate cream locally with complete relief. However, she presented again next month with

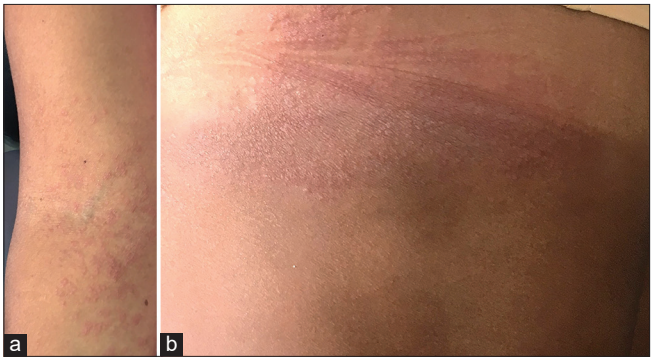


Figure 1: (a) Papulovesicular rash on forearm. (b) Urticarial rash on trunk.

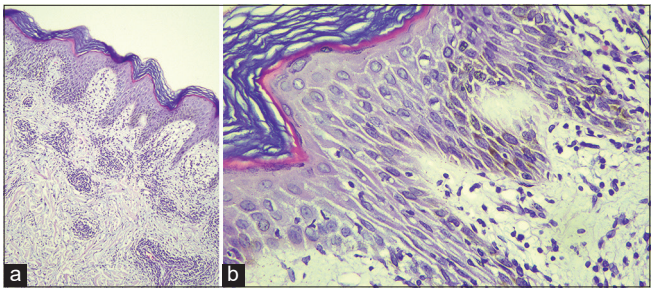


Figure 2: (a) HPE (low power) showing patchy lymphohistiocytic infiltrate in the dermis. (b) HPE (high power) showing spongiosis in the epidermis.

pruritic rash all over her body. A detailed revisit to history revealed that she had the reappearances of rash during mid-menstrual cycle every month. This led to a presumptive diagnosis of autoimmune progesterone dermatitis.

To confirm the diagnosis, intradermal progesterone test was performed on her forearm with injection progesterone 50 mg/mL, and with normal saline as control. It was observed that erythema developed at injection site within half an hour and progressed to induration in next 24 h [Figure 3]. There was no reaction at the site of normal saline injection. She was treated with a combination pill of ethinyl-oestradiol (0.035 mg) and cyproterone acetate (2 mg) from 1 day of menstrual cycle for 21 days and repeated after a gap of 7 days. There was no relapse of skin lesions after 3 such cycles [Figure 4a and b].

Autoimmune progesterone dermatitis is a rare skin disease in females who recurs in cyclic manner corresponding to the menstrual cycle. Possibility of autoimmune response to endogenous progesterone is raised due to cyclic nature of disease.[2] It is proposed that there is altered progesterone which leads to autoimmunity. The previous history of exposure to progesterone in the form of oral contraceptive pills is thought to be an incriminating factor which was not present in this case, but the same cannot be completely ruled out as use of oral progesterone to postpone menses on social occasions is quite prevalent in rural population.

Autoimmune progesterone dermatitis typically presents with itchy papulovesicular (eczematous), urticarial and annular lesions. Sometimes, recurrent stomatitis is the only manifestation. Typically, rash occurs 7 days prior and lasts for 3–4 days after the menses. The biopsy picture is usually nonspecific but perivascular dermatitis with eosinophils and interface dermatitis is common.[3] There are other conditions which exacerbate premenstrually such as herpes simplex, acne, rosacea, atopic dermatitis, contact dermatitis to nickel, psoriasis and systemic lupus erythematosus, and these need to be considered as differentials of the condition as well. Autoimmune progesterone dermatitis is reported from the age of menarche till 48 years. Prick test or intradermal test is diagnostic,[4] as was observed in this case. Provocative test

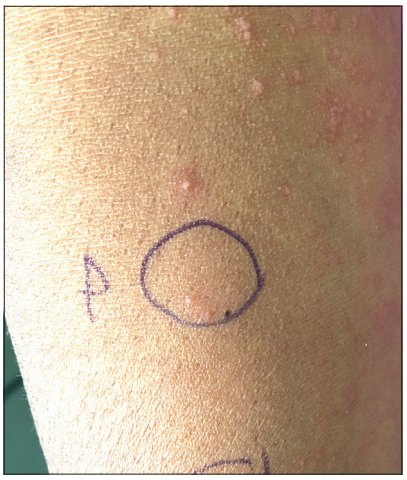


Figure 3: Erythema following intradermal progesterone injection on forearm.

Figure 4: (a) Post-treatment with oral contraceptive (OC) pills. (b) Post-treatment with OC pills.

by oral or intramuscular progesterone can be done but was deterred by possibility of severe exacerbation. Treatment is to give conjugated oestrogen, tamoxifen and danazol to suppress ovulation and progesterone surge. In severe cases, oophorectomy is also tried.[5] The treatment with ethinyl oestradiol and cyproterone acetate is a novel alternative with promising results.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Naguyen T, Ahmed AR. Autoimmune progesterone dermatitis: Update and insights. Autoimmun Rev 2016;15:191-7.

2. Rasi A, Khatami A. Autoimmune progesterone dermatitis. Int J Dermatol 2004;43:588-90.
3. James T, Ghaferi J, LaFond A. The histopathological features of autoimmune progesterone dermatitis. J Cutan Pathol 2017;44:70-4.
4. Herzberg AJ, Strohmeyer CR, Cirillo-Hyland VA. Autoimmune progesterone dermatitis. J Am Acad Dermatol 1995;32:333-8.
5. Rodenas JM, Herranz MT, Tercedor J. Autoimmune progesterone dermatitis: Treatment with oopherectomy. Br J Dermatol 1998;139:508-11.

How to cite this article: Sule R, Sadhwani M, Salunke T. Autoimmune Progesterone Dermatitis. Indian J Postgrad Dermatol 2023;1:129-31.