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CRUSTED SCABIES : A CASE REPORT

Pathology

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ABSTRACT

Scabies is one of the most common skin manifestation produced by the Acarid mites in humans. This condition is caused by the egg legged itch mite Sarcoptes scabiei var hominis also referred to as S. sarcoptes scabiei. A rare variant of scabies , the so called Norwegian scabies or crusted scabies is characterised by the presence of innumerable mites in the skin. The widespread use of immunosuppressive agents in the HIV era has led to increased incidence of this condition. Aggressive treatment is mandatory in such cases to avoid an outbreak of scabies.

KEYWORDS

Scabies, Crusted, Immunosuppression

INTRODUCTION

Norwegian (crusted scabies) is a rare contagious form of scabies consisting of widespread crusted and secondarily infected hyper keratotic lesions, found in the mentally and physically debilitated as well as in immunosuppressed patients.

Norwegian scabies also occurs in patients with epidermolysis bullosa and in neurological disorders with sensory impairment. There is an extremely heavy infestation with mites. There are only a limited number of case reports of crusted scabies found in the literature.

Case History

41 year old female patient who was a known case of Type2 Diabetes Mellitus presented with generalized itching and raised scaly lesions all over the body of 3 months duration. Itching was worse during night . She gave a history of reduced appetite and loss of weight since last 2 years. There was no history of fever, evening rise of temperature, persistent cough or breathlessness.

No history of abdominal pain , vomiting , constipation or blackish discolouration of stools. There was history of similar illness 4 years back and at this time other family members also had generalized itching.

Physical examination revealed multiple well defined hyperkeratotic scaly plaques of various sizes in scalp , both ears, elbows, hands, front and back of trunk, both knees , ankles, dorsum of feet, fingers and toes.(Figure 1). A few of the plaques show fissures over surface. Generalized dryness and excoriation marks were present.

The lady was poorly built and nourished . She had pallor and generalized lymphadenopathy. Systemic examination was within normal limits.

Laboratory tests showed mild anaemia (Hb : 9.1 gm/dl) , raised WBC count (TC : 13500 cells/cumm, P48 L38 E12 M2) , ESR : 94 mm/hr, Platelet : 4.8 lakhs/cumm, HbA1C : 13.5 %, RBS : 496 mg/dl. With a differential diagnosis of Crusted scabies, Mycosis fungoides and Psoriasis - punch biopsy from skin was taken and submitted for istopathological examination.

Macroscopically, punch biopsy skin was measuring 0.5 x 0.5 cm. Microscopic examination revealed pseudoepitheliomatous hyperplasia of epidermis along with hyperkeratosis, parakeratosis and thickened corneal layer which showed numerous mites and pig tail like structures which are likely remnants of egg shells. There was dense lymphocytic infiltrate in the dermis. (Figure 2). This histomorphology confirmed the diagnosis of crusted scabies.

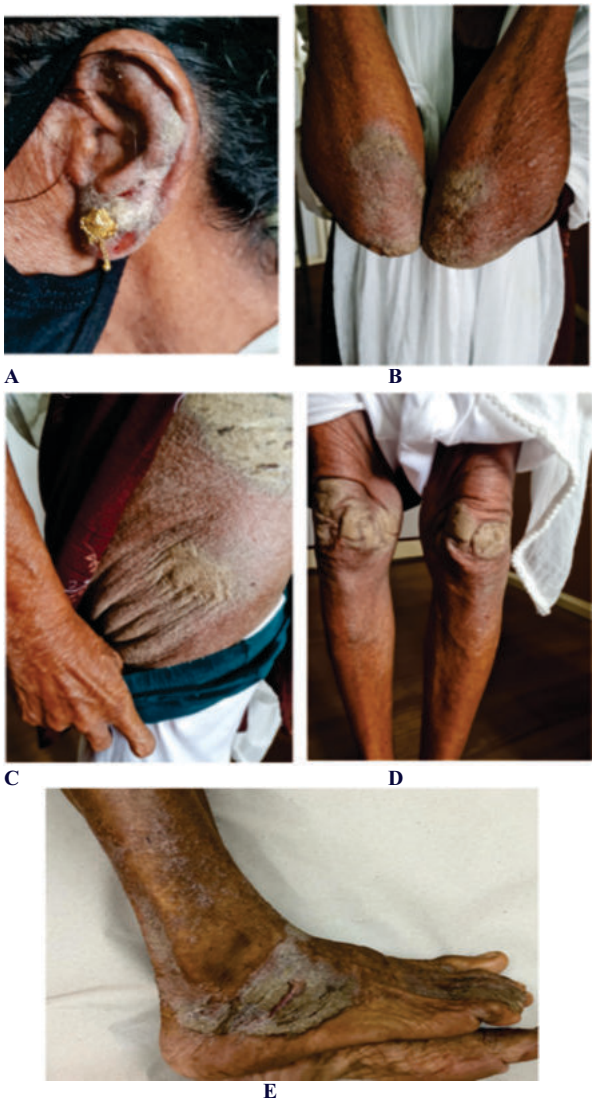

Figure 1 (A- E) Hyperkeratotic scaly plaques in both ears, elbows, trunk, knee , ankles, dorsum of feet and toes

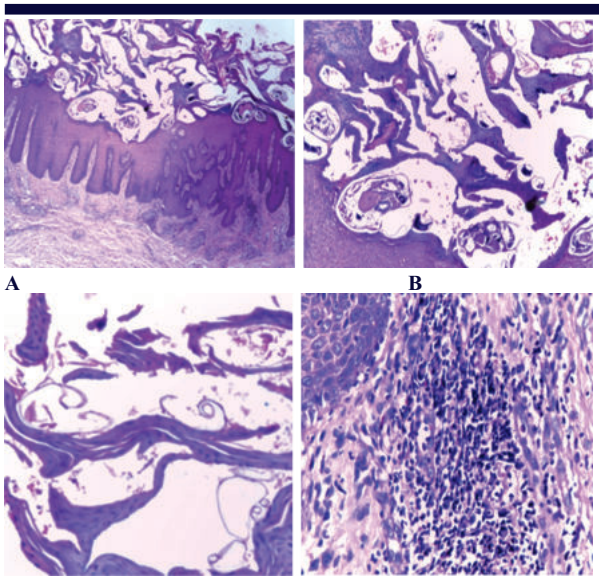

Figure 2 : (A-D) Stratum corneum of epidermis showing mites and pig tail like structures , likely remnants of egg shells along with dermal lymphocytic infiltrate

DISCUSSION

Scabies is a contagious disease caused by the mite Sarcoptes scabiei var.hominis. It is acquired particularly under conditions of overcrowding and poor personal hygiene or during sexual contact. A study of the prevalence of scabies worldwide has shown that all regions except Europe and the Middle East have populations with a prevalence greater than 10% , this prevalence is highest in the Pacific and Latin American regions and among children compared with adolescents and adults.

The chief culprit is the female mite which measures upto 0.4 mm in length and rather less in breadth , (Fig 3) whereas the adult male, which dies after copulation is much smaller. The sites most commonly affected are the interdigital skin folds , the palmar surfaces of hands and fingers, the wrists , the nipples , the inframammary regions and the male genitals.

Three clinical forms are found : papulovesicular lesions , persistent nodules and Norwegian (crusted scabies). The usual lesions are papules and papulovesicles that are intensely pruritic. In approximately 7% of patients , particularly children and young adults , reddish brown pruritic nodules develop. These lesions may persist for a year , despite treatment. This form is called persistent nodular scabies and is thought to represent a delayed hypersensitivity reaction. The third form is the Norwegian (crusted scabies) which is a rare contagious form mainly seen in immunocompromised patients. There is an extremely heavy infestation with mites in crusted scabies.

In Norwegian scabies, there is a massive orthokeratosis and parakeratosis containing mites in all stages of development. The underlying epidermis shows psoriasiform hyperplasia with focal spongiosis and exocytosis of eosinophils and neutrophils , sometimes producing intraepidermal microabscesses. The dermis contains a superficial and deep infiltrate of chronic inflammatory cells. Eggs , larvae, mites and excreta may be seen in the stratum corneum if an obvious burrow is excised. Pink “pigtails” connected to the stratum corneum representing egg fragments left behind after the mite hatches may be present.

Polarization microscopy may also be helpful in recognizing elements of organisms. Dermoscopy can also be helpful with finding of “jet with condensation trails” which shows the S- shaped burrow filled with eggs and fecal material (scybala).(Figure4)

Complications include secondary bacterial infections including impetigo, ecthyma, cellultis, lymphangitis, generalized lymphade nopathy and rarely septicemia. Treatment includes isolation of the patients. The mainstay of treatment is topical scabicidal agents – first one being Permethrin followed by lindane and benzoyl benzoate.

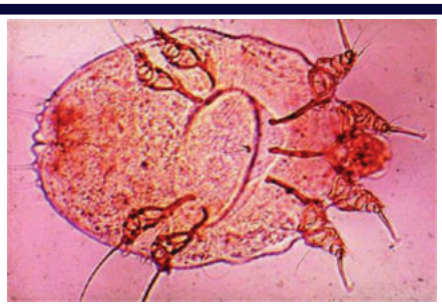

Figure 3

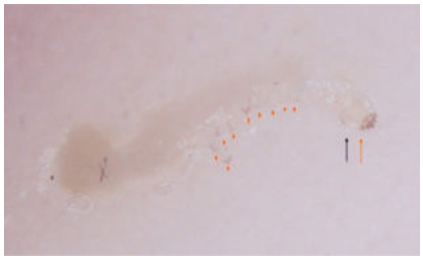

Figure 4

CONCLUSION

Diagnosis and treatment of crusted scabies creates new challenges in the era of HIV infection and other immunocompromised conditions. So early diagnosis and proper treatment helps in preventing an outbreak of scabies.

REFERENCES

1. Danielsen DG, Boeck W. Treatment of Leprosy or Greek Elephantiasis. Paris: JB Balliere; 1848.
2. Parish LC, Lomholt G. Crusted scabies alias Norwegian scabies. Int J Dermatol 1976;15:747-8.
3. Orkin M. Special forms of scabies. In: Scabies and Pediculosis. Orkin M, Maibach HI, Parish LC, and Schwartzman RM Editors. Philadelphia: Lippincott; 1977. p. 23-30.
4. Anbar TS, El-Domyati MB, Mansour HA, Ahmad HM. Scaly scalp associated with crusted scabies: Case series. Dermatol Online J 2007;13:18.
5. Dia D, Dieng MT, Ndiaye AM, Ndiaye B, Develoux M. Crusted scabies in Dakar apropos of 11 cases seen in a year. Dakar Med 1999;44:243-5.
6. Roberts LJ, Huffam SE, Walton SF, Currie BJ. Crusted scabies: Clinical and immunological findings in seventy-eight patients and a review of the literature. J Infect 2005;50:375-81.
7. Mellanby K. Biology of the parasite. In: Scabies and Pediculosis. Orkin M, Maibach HI, Parish LC, Schwartzman RM Eds. Philadelphia: Lippincott; 1977. p. 9-16.
8. Karthikeyan K. Scabies in children. Arch Dis Child Educ Pract Ed 2007;92:65-9.
9. Alexander JOD. Arthropods and skin. Berlin: Springer-Verlag, 1984:50-5.
10. Huffam SE, Currie BJ. Ivermectin for Sarcoptes scabiei hyperinfestation. Int J Infect Dis 1998;2:152-4.
11. Falk ES, Thorsby E. HLA antigens in patients with scabies. Br J Dermatol 1981;104: 317-20.
12. Morsy TA, Romia SA, al-Ganayni GA, Abu-Zakham AA, al- Shazly AM, Rezk RA. Histocompatibility (HLA) antigens in Egyptians with two parasitic skin diseases (scabies and leishmaniasis). J Egypt Soc Parasitol 1990;20:565-72.
13. Walton SF, Beroukas D, Roberts-Thomson P, Currie BJ. New insights into disease pathogenesis in crusted (Norwegian) scabies: The skin immune response in crusted scabies. Br J Dermatol 2008;158:1247-55.
14. Karthikeyan K. Treatment of scabies: Newer perspectives. Postgrad Med J 2005;81:711.
15. Gladstone HB, Darmstadt GL. Crusted scabies in immunocompotent Child. Pediar Dermatol 2000;17:144-8.
16. Nakamura E, Taniguchi H, Ohtaki N. A case of crusted scabies with a bullous pemphigoid-like eruption and nail involvement. J Dermatol 2006;33:196-201.
17. Jucowics P, Ramon ME, Don PC, Stone RK, Bamji M. Norwegian