

DERMATITIS CRURIS PUSTULOSA ET ATROPHICANS

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Fifteen male soldiers, having dermatitis cruris pustulosa et atrophicans were studied clinically, bacteriologically, histopathologically and immunologically. Average age at detection was 26 years. Skin lesions were classically distributed on the legs. *Staphylococcus aureus* was grown from the lesions. Histopathological findings were of eczematous pattern with polymorphic cellular infiltrate in the dermis. IgG and IgA levels in blood were increased.

Key words: Dermatitis cruris pustulosa et atrophicans, Folliculitis.

A peculiar pustular dermatitis on legs of some Negro patients in Nigeria was noticed by Clarke¹ in 1952, who called it dermatitis cruris pustulosa et atrophicans (DCPA) and thought it to be a new entity. Since then cases of this entity have been seen elsewhere also namely: Accra, Ghana, Trinidad,² Nigeria³ and India.^{4,5}

Characteristic features of this disease are pustular folliculitis, cutaneous oedema, scales, loss of skin markings, atrophy and shininess of the skin surface, appearing symmetrically on the legs between the knee and the ankle, mainly on the anterior surfaces. General health remains unaffected. Histopathological features are loosening of the stratum corneum, acanthosis, parakeratosis, intercellular oedema, presence of prematurely keratinized cells, and in the dermis oedema and infiltration with lymphocytes, eosinophils, plasma cells, polymorphonuclear leucocytes, histiocytes and an occasional giant cell. In healed lesions, atrophy and fibrosis are seen in the epidermis and dermis respectively.² *Staphylococcus pyogenes* is grown from the pustular lesions.⁶ This study aims at reviewing the clinical, pathological and immunological findings in a series of 15 cases of DCPA.

Materials and Methods

The material comprised of 15 patients of DCPA seen during the 5 years in three military hospitals. Detailed case history, clinical, bacteriological and histopathological examination was recorded in each case.

Results

All patients were male soldiers in the age group 21-34 years, mean age being 26 years. Duration of the disease varied from 8 weeks to 2 years. Trade-wise distribution was, riflemen 7, general duty personnel 3, vehicle mechanics 2, and cook, driver and gunner 1 each. Clothing material used was cotton and terrycot. No exacerbation of symptoms was reported on wearing uniform. History of oil massage was given by 5 patients. All of them used mustard oil after bath on their legs and arms. Winter aggravated the condition in 10, summer in 3, while in 2 cases, the lesions persisted throughout the year. Five patients, cook, driver, vehicle mechanic and gunner noticed improvement during leave at home, away from the job. These personnel come in contact with oils while engaged in work.

There was no family history of a similar disease in any case. In addition to the skin disease under study, 2 patients had diabetes mellitus, 2 chronic tonsillitis, 3 intestinal amoebiasis and 1 tuberculoid leprosy.

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Itching was the chief symptom in 9 cases. Clinically, the disease manifested in the form of oedema, shininess, scaling and atrophy of the skin with the loss of skin markings in addition to follicular pustules and erythematous papules. Involvement of the skin of both legs between the knee and the ankle was striking in all cases. Usually, the upper posterior part of the leg was spared. In 2 patients, similar lesions were seen on the distal parts of forearms also.

Staphylococcus aureus was grown from the pustular lesions of all patients and at different occasions. The organisms were generally susceptible to erythromycin, gentamicin, cotrimoxazole, chloramphenicol, ampicillin and oxytetracyclin, in that order. To penicillin, 13 strains were resistant while 2 were only partially sensitive. Antibiotic sensitivity pattern of the bacteria showed variation from time to time in the same case.

Histopathologically, the epidermis revealed mild to moderate hyperkeratosis and parakeratosis in loose bands of stratum corneum. Acanthosis and spongiosis was constantly observed. Occasionally, RBC-containing vesicle was seen in mid-epidermis. In the dermis, infiltration with macrophages, plasma cells, eosinophils and a few neutrophils was seen which at places invaded the epidermis.

IgG was increased in all cases. The levels varied from 1650 to 1973 mg/100 ml. IgA was marginally increased in 3 cases only. No increase in IgM level was seen.

Comments

This entity, described in the blacks by the western authors, is not rare in the Indians. Male preponderance continues. No definite precipitating factors can be detected. However, dryness of skin, infection, greasy topical preparations and local oil massage have been recorded to aggravate the existing lesions. While *Staphylococcus aureus* is frequently grown from the follicular pustules, their antibiotic susceptibility patterns are very variable. Quick genetic mutation in the strains, though suspected, is difficult to prove. Investigations done to detect substrate susceptibility do not help much.

References

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