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CASE REPORT

Histoid Leprosy Presenting De Novo: A Rare Variant in the Post-Elimination Era

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Abstract

Histoid leprosy is an uncommon variant of lepromatous leprosy, presenting with distinctive clinical and histopathological features which also mimic other entities. We report a case of a 10-year-old male who developed multiple, elevated dome shaped erythematous as well as skin coloured lesions over bilateral arms, elbows and abdomen for two months, without any history of contact, similar lesions or treatment. The unusual presentation led to a diagnostic dilemma, with initial differentials including sarcoidosis, xanthoma, and dermatofibroma. The absence of non-caseating granulomas and their characteristic histopathological pattern ruled out these conditions. Fite-Faraco staining revealed a heavy bacillary load with cluster (globi) formation, confirming the diagnosis of de novo histoid leprosy. This case highlights the importance of recognizing de novo histoid leprosy even in the absence of prior treatment or contact history, as early diagnosis and appropriate therapy are essential to prevent disease transmission and complications.

Key Words

Histoid, Histiocytoid Leprosy, Hansens, Dermatopathology

Introduction

Histoid leprosy is a distinct and rare variant of lepromatous leprosy. It shows unique features and mimics a few other conditions, making its diagnosis difficult. It is mostly associated with dapsone monotherapy, inadequate therapy, or mutated bacilli, although cases occurring de novo have been well documented[1]. Typical presentation is of multiple nodules, papules, and plaques. Lesions are shiny and well-demarcated, with the rest of the skin uninvolved. The characteristic microscopic feature is the presence of sheets of round to spindle-shaped histiocytes often arranged in a storiform pattern [2]. Clinically these may mimic keratoacanthomas and cutaneous metastases, while microscopically they may resemble dermatofibroma or benign fibrous histiocytoma [3]. Having a high index of suspicion and performing Fite–Faraco staining is essential to detect this highly infectious variant [4]. The latest incidence and prevalence rate among child cases in india ranging from 1.1% to 4.7% and 1.14% to 3.6% respectively[5].

Case Report

A 10-year-old male presented to the dermatology department with skin lesions persisting for two months. He complained of tingling and loss of sensation over the hands and legs, along with elevated lesions. There was no prior history of similar lesions or treatment. On examination, multiple elevated dome-shaped lesions were present— some erythematous, some skin-colored ranging from 1 to 3 cm. They were distributed over the legs,

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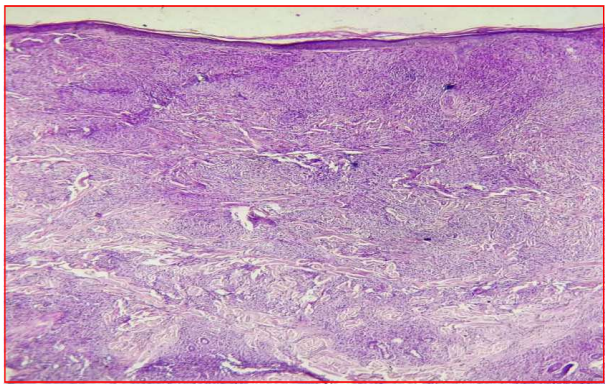

Figure 1: Section shows epidermis lined by keratinized stratified squamous epithelium with thinning out at places and dermis shows fusiform histiocytes (10X, H & E).

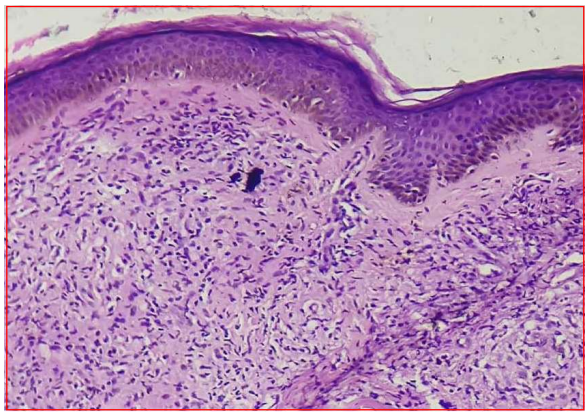

Figure 2: Section shows epidermis and dermis showing fusiform histiocytes (40X, H & E).

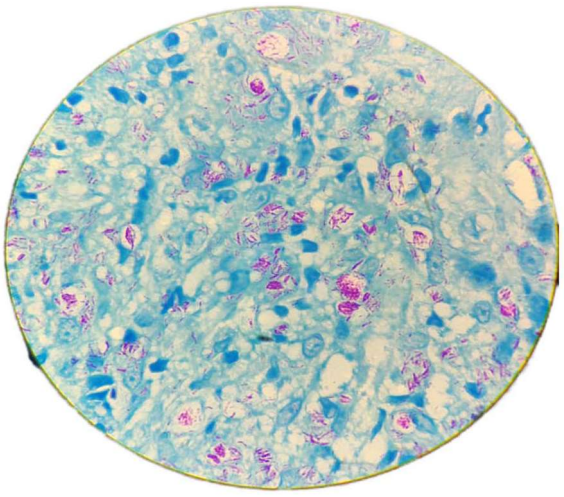

Figure 3: Fite-Faraco staining shows multiple acid fast bacilli (100X).

abdomen, and elbows. A 4 mm punch biopsy was taken under aseptic conditions from the right lower back, placed in formalin, and sent for histopathological examination.

Microscopy revealed an atrophic epidermis with effacement of rete ridges and an evident grenz zone. The dermis was extensively infiltrated by sheets and nests of histiocytes, interspersed with fibro-collagenous bands. The infiltration surrounded skin appendages, blood vessels, and muscles, comprising foamy macrophages and spindle-shaped histiocytes arranged in a loose storiform pattern admixed with lymphocytes and plasma cells[3]. Fite–Faraco staining demonstrated a high bacillary load with globi formation, confirming histoid leprosy consistent with classical findings[6].

Discussion

In this case, leprosy was considered the most probable diagnosis; however, the erythematous nature of the lesions and lack of contact history raised the possibility of sarcoidosis. The absence of non-caseating granulomas ruled out sarcoidosis, while xanthomas and dermatofibromas were excluded based on their distinctive histopathological features like presence of foamy macrophages, lipid deposits, giant cells to rule out xanthomas and for dermatofibromas there is absence of bacilli on fite- faraco stain.

Histoid leprosy can be considered either a variant of lepromatous leprosy or a distinct clinical entity. Most cases occur in men between 21 and 40 years of age[7]. Clinically, it is characterized by cutaneous or subcutaneous nodules and papules that may be erythematous or skin-colored to yellowish-brown, shiny, and firm, with surrounding normal skin. Lesions typically occur over bony prominences such as elbows and knees, but may also involve arms, thighs, dorsum of hands, lower back, and buttocks[8].

Histopathologically, hallmark features include epidermal atrophy, a clear grenz zone, and fusiform histiocytes arranged in whorled or storiform patterns. Numerous acid-fast bacilli are present within these histiocytes[9]. De novo cases with negative slit-skin smears and no nerve thickening have also been reported[10].

Conclusion

Histoid leprosy presents diagnostic problems that might delay treatment, adding to continued transmission. Patients often display greater resistance to normal therapy, serving as reservoirs for bacilli. This report highlights the need for early recognition and appropriate management as this rare entity presents in early age group.

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