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PhotoDermDiagnosis

Painless, crusted and coalesced papules on right thumb

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A 25 years old female patient presented to us with a one-year history of erythematous papules coalescing to form an indurated plaque with an overlying crust and scale with central ulceration on her right thumb **(Figure 1)**. The lesions were not associated with burning, pain or itching. The right thumb appeared to be visibly swollen as compared to the left thumb. There was no systemic complaint and systemic examination was unremarkable. Patient was being treated under the provisional diagnosis of infected eczema for which she received various oral and topical antibiotics as well as topical steroids application, but the lesion failed to respond to these agents. There was no history of any contact allergies. Patient gave a history of travel to the Khyber Pakhtunkhwa which is endemic for cutaneous leishmaniasis (CL). Patient did not recall any insect bite history but itchy red papule started one month after her return which gradually progressed and eventually became static. On the basis of her history and examination, a provisional diagnosis of CL was made. Dermal scraping was done for LD bodies which was negative. Histopathological examination showed hyperkeratosis, normal granular layer, basal layer showed vacuolar degeneration. Dermis showed diffuse inflammatory infiltrate containing lymphocytes and plasma cells.Within the histiocyto-macrophage component, the presence of small hematoxylinophilic formations, round, uniform in appearance, intracytoplasmic morphologically suggestive of *Leishmania* amastigotes could be appreciated **(Figure 2)**.

Figure 1 Erythematous, indurated plaque on right thumb with crust and central ulceration.

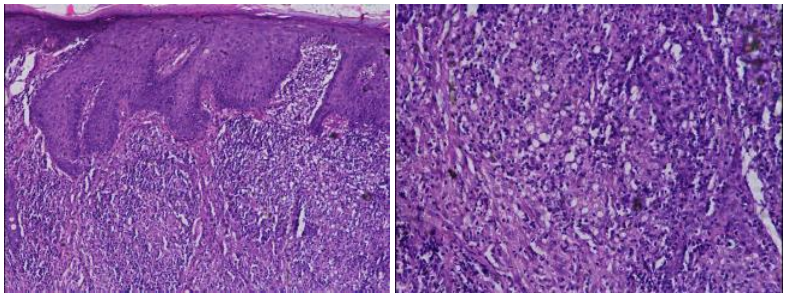

Figure 2 Histopathology of the lesion showing epidermal hyperkeratosis, dermis shows dense lymphocytic infiltrate, plasma cells and LD bodies.

What is the diagnosis?

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Diagnosis

Cutaneous leishmaniasis.

Discussion

Leishmaniasis is a parasitic infection, there are known to be over 20 causative species of the parasite.The most common form is the cutaneous leishmaniasis (CL), which manifests different dermatological signs and symptoms such as ulcers, crusted papules or plaques, mainly on the uncovered body parts, this can lead to disability if not addressed timely. The mode of transmission of the parasites responsible to cause leishmaniasis is through the bite by the infected female sandfly, which lays eggs when it feeds on the blood.[1] The most common affected body sites include the face, hands and legs. The signs and symptoms can be very diverse. The skin lesions usually remain minimally symptomatic, mild itching or pain can sometimes be reported. The skin lesions can typically evolve into the "yearly sore" or locally termed as "kala-dana".[2] In case of clinical suspicion, the diagnosis can be confirmed by various methods. Leishman Donovan bodies (LD bodies) can be visualized under the microscope, when the tissue specimen taken from the infected wound is processed in special cultures.[3] Histopathological examination of the skin smear can further confirm the diagnosis. The specific findings include the demonstration of intra-cytoplasmic organisms called amastigotes, present in the dermis along with granulomas comprising mainly of histiocytes, macrophages. In acute lesions, there can be dense, mixed inflammatory inflitrate.[4] There are various therapeutic options but the most frequently used approach is by intra-lesional injections of antimony in case of a localized lesion, however other modalities such as thermotherapy, cryotherapy and topical treatments are also available. Therapeutic agents such as sodium stibogluconate and miltefosine in cutaneous leishmaniasis have also proven to be efficacious.[5] In this particular case, we administered intra-lesional Meglumine antimoniate such that the skin would be blanched upon injecting, and almost 1mm area of the surrounding normal skin. The sessions were given twice weekly for one month and then once weekly subsequently. After 10 sessions of intra-lesional administrations, there was disappearance of the induration and complete re-epithelization **(Figure 3).**

Figure 3 shows complete re-epithelialization of ulcer and visibly reduced girth after intralesional Meglumine antimoniate therapy.

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