



Case illustrated

Prototheca: A Danger Underwater

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ABSTRACT

Prototheca wickerhamii rarely causes systemic infection in humans but when it occurs, there are coexisting comorbidities. This case illustrated shows the manifestation of this opportunistic microorganism in an immunosuppressed patient. The patient was successfully treated with Liposomal amphotericin B with complete resolution of the lesions.

A 43-year-old Hispanic male was receiving high dose steroids for idiopathic thrombocytopenic purpura (ITP), was admitted for dehydration and received intravenous fluid replacement. During a follow up visit he was noted to have painless purpuric circular lesions with associated erythema and thickening in his left arm (Fig. 1). Antibacterial therapy with doxycycline and vancomycin was started without improvement of the skin lesions. Biopsies were taken and initially came back negative for Gram staining and other two stainings, Ziehl-Neelsen and KOH, but further testing was positive for *Prototheca wickerhamii*

(Fig. 2). *Prototheca* is an algae that rarely causes infection, mainly occurring in patients with predisposing conditions such as immunosuppression, occupation exposure like aquariums and traumatic inoculation [1–3]. The optimal approach of treatment for protothecosis is uncertain and there is ongoing controversy [2,3], Liposomal amphotericin B was started with complete resolution of the skin lesions. The diagnosis is established based on microbiologic tests and/or direct identification in tissue specimens [4,5].

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Fig 1. Arrows are pointing to the cutaneous manifestation of the Prototheca in the immunocompromised patient.

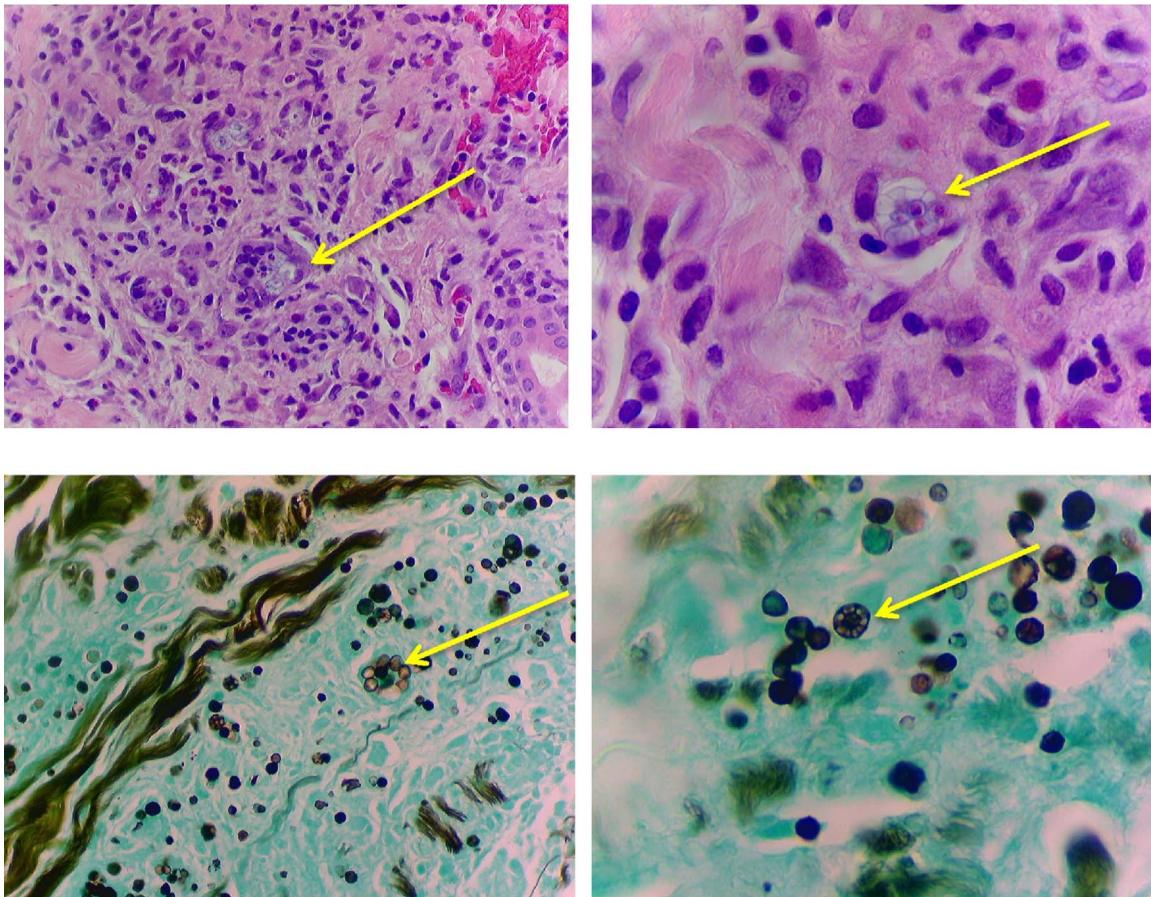


Fig. 2. Images are showing the histopathological finding of the Prototheca in Hematoxylin and Eosin (H & E) stain and Gomori Methenamine Silver (GMS) stain, A–B and C–D respectively.

References

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