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Case report

Facial rash in a renal transplant patient

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A 29 year old Hispanic woman originally from Texas presented to an out-patient clinic in Wisconsin with a 7 month history of left sided facial rash. It initially started as a pimple-like lesion. It progressively increased in size with scabbing, associated with pruritus and occasional seropurulent drainage. The lesions did not respond to oral antimicrobials. She reported having a skin irritation to the same left cheek area about 2 years prior to presentation associated with significant itching; however this did not progress and resolved overtime when she moved to the Midwest. Her past medical history was significant for end stage renal disease of unknown etiology.

She has a history of renal transplant twice. The first renal transplant was 14 years prior in Texas which failed after 7 years. She had her second transplant 3 months prior to developing the facial lesion in Wisconsin. She has been on cyclosporine, mycophenolate and prednisone since her transplantation. Born and raised in Texas, she moved to Wisconsin 2 years prior to presentation.

Physical examination revealed a 5 × 5 cm crusted plaque like lesion to the left lower cheek (panel A). There was no lymphadenopathy; her chest x ray was negative.

She had a punch biopsy of the left lower cheek lesion which showed large spherules ranging in size from 10 to 30 μm that appeared to contain endospores (panel B; hematoxylin and eosin) and arthroconidia (panel C). *Coccidiodes posadasii* was isolated from the fungal cultures of the biopsied specimen. She was treated with fluconazole with gradual resolution of the skin lesion. She was maintained on fluconazole indefinitely given continued immunosuppression (Figs. 1–3).

Coccidioidomycosis is an endemic mycosis caused by the dimorphic fungi, *coccidioides immitis or coccidiodes posadasii* [1]. These organisms are endemic in southwestern United States, Mexico, and some areas in South and Central America. C. immitis is predominantly geographically distributed in California, whereas c. *posadasii* is found more in Arizona, Utah and Texas [2].

The primary infection with this organism is almost always acquired by inhalation of microscopic arthrospores and a majority of infected patients remain asymptomatic [3]. Persons with impaired immune function such as solid organ transplant recipients, hematological malignancy and chronic steroid use are at risk for severe symptomatic infection including extra-pulmonary manifestation and dissemination [4]. Disseminated disease generally manifests within 2 years of ex-

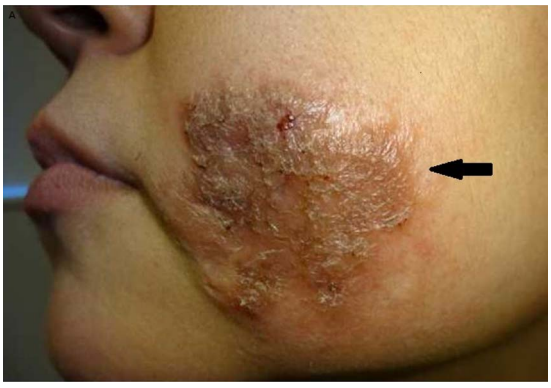

Fig. 1. 5 × 5 cm crusted plaque like lesion to the left lower cheek (panel A).

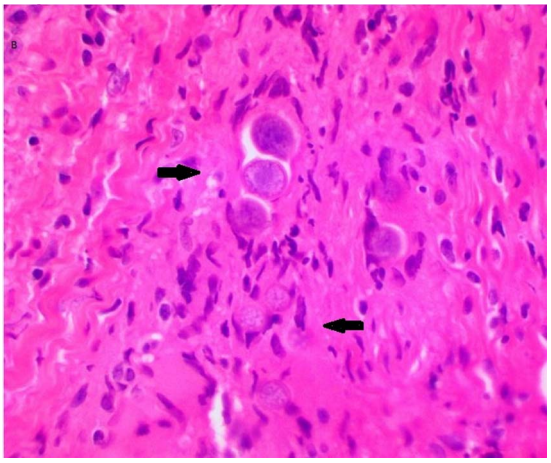

Fig. 2. Large spherules ranging in size from 10 to 30 μm that appeared to contain endospores.

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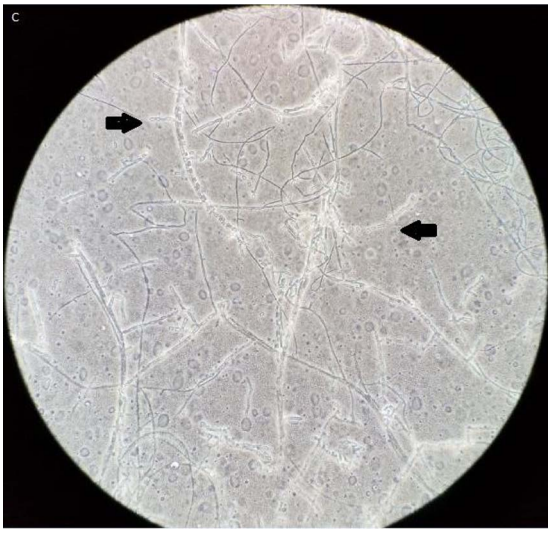

Fig. 3. Arthroconidia.

posure and occurs in 1–2% of all patients with coccidioidomycosis [5]. Infection risk is highest within the first post-transplant year and this is amplified by immunosuppressive therapy [6] as was the case in our patient. Dissemination can affect any organ, the skin being one of the most common sites, especially involving the nasolabial fold, face, neck, scalp and chest wall [7,8]. The clinical appearance of the skin lesions vary widely and display diverse histological morphology [7].

Patients in endemic areas undergoing transplantation should be screened for active coccidioidomycosis and oral azoles should be considered for 6–12 months post-transplant even in the absence of active disease [9]. To the best of our knowledge, the patient was not screened for coccidioidomycosis prior to her first and second kidney transpants.

In summary, cutaneous involvement is a well-known presentation of coccidioidomycosis, more so in immunocompromised hosts. Prompt diagnosis with a skin biopsy is pertinent to institute the appropriate treatment.

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Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of the journal on request.

Conflict of interest

None.

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