



## Case illustrated

## Fusarium vascular graft infection

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## ABSTRACT

A 37-year-old African American male with a past medical history significant for end stage renal disease on hemodialysis via a femoral arteriovenous graft, systemic lupus erythematosus, with a recent hospitalization for cavitary *Candida* pneumonia treated with micafungin, presented with a fever of 102° F for 3 days and worsening left groin pain. He also complained of chills, nausea, and malaise. On physical examination, the patient was hemodynamically stable with swelling and tenderness at the site of the graft. He was started on vancomycin, piperacillin/tazobactam and micafungin. Computed tomography scan and duplex scan of the left lower extremity showed diffuse swelling and attenuation of the graft material consistent with thrombosis of the graft. Excision of the graft and thrombectomy was performed and the graft thrombus was sent for culture. Examination of the sample showed fungal hyphae (Figure). Micafungin was switched to voriconazole; however, the patient did not show any improvement of his groin pain. On day 5 of hospitalization, culture showed *Fusarium*, and hence amphotericin B was added resulting in subsequent clinical improvement. We are presenting an unusual site of *Fusarium* infection which responded to combination therapy, a case which has not been reported. © 2019 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

A 37-year-old African American male with a past medical history significant for end stage renal disease on hemodialysis via a femoral arteriovenous graft, systemic lupus erythematosus, with a recent hospitalization for cavitary *Candida* pneumonia treated with micafungin, presented with a fever of 102° F for 3 days and worsening left groin pain. He also complained of chills, nausea, and malaise. On physical examination, the patient was hemodynamically stable with swelling and tenderness at the site of the graft. He was started on vancomycin, piperacillin/tazobactam and micafungin. Computed tomography scan and duplex scan of the left lower extremity showed diffuse swelling and attenuation of the graft material consistent with thrombosis of the graft. Excision of the graft and thrombectomy was performed and the graft thrombus was sent for culture. Examination of the sample showed fungal hyphae (Fig. 1). Micafungin was switched to voriconazole; however, the patient did not show any improvement of his groin pain. On day 5 of hospitalization, culture showed *Fusarium*, and hence amphotericin B was added resulting in subsequent clinical improvement.

We are presenting an unusual site of *Fusarium* infection which responded to combination therapy, a case which has not been

reported. *Fusarium* is an ubiquitous mold present in soil and water, most often causes infections in immune compromised hosts such as stem cell transplant recipients or patients with prolonged neutropenia [1].

Currently, voriconazole is the only drug that is FDA approved for treatment of *Fusarium* species in the United States. However,

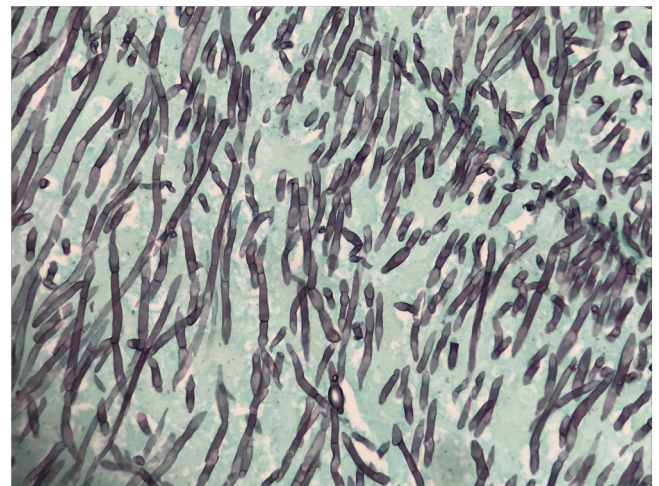


Fig. 1. GMS stain positive for fungal forms.

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combination with amphotericin B has also been reported [2]. The best antifungal agent for the treatment of *Fusarium* infection has yet to be defined. Echinocandins, like micafungin, lack activity against *Fusarium*, explaining initial treatment failure. *Fusarium* species have higher susceptibility to amphotericin B as compared to the azoles, although successful outcomes have been achieved with combination therapy [3].

#### **Conflict of interest**

None.

#### **References**

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