Rare cutaneous manifestation of *Trichosporon asahii*

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**DESCRIPTION**

An 85-year-old woman with a history of coronary artery disease, heart failure with preserved ejection fraction, hypertension, hyperlipidaemia, diabetes mellitus, chronic obstructive pulmonary disease on home oxygen, pulmonary embolism, gastrointestinal bleeding secondary to erosive gastritis, hypothyroidism and chronic kidney disease presented to the emergency room with acute urinary retention. She was admitted to our institution a month prior with respiratory distress secondary to a pulmonary embolism complicated with cardiac arrest. She was discharged home after a short length of stay. She had a surgical history of a hemicolecotomy because of colon cancer 26 years ago.

Early during the hospitalisation, she had a gastrointestinal bleed necessitating transfusion of two units of packed red blood cells. She subsequently developed respiratory failure requiring intubation. Henceforth the patient was managed with respiratory support provided via mechanical ventilation in the intermediate care unit. The patient’s condition improved, and 3 days later, she was successfully extubated. Her laboratory studies revealed a white cell count of 6.1×10^9/L, haemoglobin 83 g/L and platelets 192 ×10^9/L. In our unit, the cardiopulmonary examination was normal. Skin examination showed an ulcer on the dorsum of the right hand with thickened borders, clean pink tissue at the base with surrounding oedema but without any discharge (figure 1). A detailed history was obtained from the patient regarding the ulcerations on the hand. She stated that the ulcer started as a necrotic wound at the insertion site of a peripheral line a few days after the previous admission.

A skin biopsy was obtained for cytology and culture. In the tissue obtained for culture, *Trichosporon asahii* was identified by Biomerieux Maldi, a mass spectrometry microbial identification system, and the patient started treatment with voriconazole 400 mg orally two times per day. The patient recovered, and 3 days later, she was discharged home to complete a 30-day course of oral antifungal treatment. The patient was readmitted 45 days later due to weakness. Her haemoglobin was 67g/L. She received one unit of packed red blood cells and was discharged 24 hours later. During this last admission, the skin ulcer was completed healed.

Trichosporon species, especially *T. asahii* (formerly known as *Trichosporon beigelii* and *Trichosporon cutaneum*), is an emerging and common cause of non-Candida fungaemia. Disseminated trichosporonosis typically starts as an acute febrile illness that progresses to multiorgan failure. In two large studies regarding *Trichosporon* species, invasive infections were associated with antibiotic therapy, central line use, neutropaenia, high doses of steroids, haematological malignancies and intensive care admissions. The crude mortality rate is more than 50% of the patients.

Trichosporon species have been misdiagnosed as contaminants because they are part of the skin microbiota. *T. asahii* is considered the leading cause of disseminated infections. Superficial infections due to *T. asahii* are sporadic and rare, occurring primarily in immunocompetent patients. White piedra, a superficial infection of hair shafts, is the most common superficial infection, which mainly occurs in tropical regions. Other cutaneous manifestations have been previously described in very few patients. In five patients, it included erythematous papules more frequently in the trunk and extremities followed by bullae formation. In another patient, a cellulitis with progression into the subcutaneous tissues resulted in a fatal outcome. In our patient, it initially manifested as central necrosis. At the time of the second admission, it appeared as an ulcer at the site of a prior peripheral line insertion.

**Contribution**

JS, CH and DC participated in the clinical management of the patient. JS, CH and DC obtained and edited the picture. CH, IF and DC have been involved in the drafting and discussion of the manuscript. JS, CH, IF and DC reviewed and approved the final version.

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REFERENCES