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Mycobacterium *mucogenicum* causing central line-related sepsis in a home parenteral nutrition patient

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Home parenteral nutrition is an important tool in the management of long-term intestinal failure. These patients require long-term intravenous access making them susceptible to line infections. Where intravenous line sepsis has been reported involving rapidly growing mycobacteria, this has almost exclusively been in immunocompromised patients.

We report the first case of opportunistic line-sepsis with a prolonged clinical course that was caused by the rapidly growing Mycobacterium *mucogenicum* in an immunocompetent, home parenteral nutritional patient.

A patient administering home parenteral nutrition since 2001 presented to the emergency department with a 1-month history of malaise, nausea, generalised aches and pains and hot flushes following use of the line. The patient was tachycardic with an elevated C-reactive protein (CRP). Total parenteral nutrition was withheld and oral intake only was encouraged. On saline infusion of the line on day 4, the patient developed a temperature and had rigors. Vancomycin was commenced for 7 days, resulting in normalisation of the CRP. During which 16S rRNA PCR sequencing, following positive blood and line cultures, returned a result of Mycobacterium *mucogenicum*. No change in antibiotics was deemed necessary as the patient appeared to recover and remained apyrexial. However, further fevers and rigors prompted removal of the line. A new line was re-sited 6 weeks later. The subsequent six months' parenteral feeding was uneventful.

In patients with an indwelling nutrition line presenting with fever, infection with rapidly growing mycobacterium should be considered, particularly in cases where there is a history of exposure to medical or dental environments and their water supplies. The absence of exit site infection or of immunosuppression does not exclude infection with RGM and such isolates ought not be dismissed as laboratory contaminates. In immunocompromised patients, a diagnosis of RGM-associated line sepsis should be managed with removal of the line together with antimicrobial therapy as determined by an antibiogram. In immunocompetent patients, this adjunct may not be necessary. This case demonstrates the utility of 16S sequencing in the identification of unusual organisms. Use of molecular techniques will likely result in increasing identification of atypical causes of line sepsis, and this accurate identification will obviously direct patient management.