A Fast growing *Mycobacterium* that grew so slow

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**Introduction**

Recent data suggest that more than 500,000 people receive treatment for the diagnosis of end stage renal disease in the United States; most new patients initiate hemodialysis while about 6% choose continuous ambulatory peritoneal dialysis (CAPD). Peritonitis is a significant complication in CAPD patients and a leading cause for the switch from peritoneal to hemodialysis. Although uncommon, non-tuberculous mycobacterium are at times the culprit for peritonitis in CAPD patients; the diagnosis is often time difficult.

**Case**

A 57 year old gentleman with a past medical history significant for end stage renal disease on continuous ambulatory peritoneal dialysis (CAPD) presented to the emergency department with complaints of abdominal tenderness, erythema around his peritoneal dialysis catheter site, cloudy peritoneal fluid after dialysis, and fever. He was initially suspected to have peritonitis; cultures were drawn from the peritoneal fluid; and he was empirically treated with peritoneal cefazolin and ceftazidime and discharged home. Two days later the patient returned to the emergency department with the complaint of “passing out”; in addition, he was noted to have continued fevers as well as abdominal tenderness. There was concern for possible sepsis induced hypotension and he was empirically placed on IV vancomycin and ceftazidime. Peritoneal, blood, and urine cultures, including the initial peritoneal cultures, remained negative. He was again discharged home, although this time empirically taking peritoneal vancomycin and ceftazidime. Almost one week post-discharge his peritoneal cultures grew out *Mycobacterium chelonae* and *Mycobacterium abscessus*. His catheter was surgically removed; he was converted to hemodialysis; and his antibiotics were de-escalated to gentamycin based on sensitivities as an outpatient.

**Discussion**

Peritonitis is a feared complication of peritoneal dialysis and is one of the most common reasons for conversion to hemodialysis. Frequent culprits in the non-tuberculous *Mycobacterium* are the fast growing *Mycobacterium chelonae* and *Mycobacterium abscessus* species; these organisms are ubiquitous and not typically found in immunocompetent patients. With proper incubation, growth is usually seen within 7-10 days on special media such as Löwenstein-Jensen agar and/or liquid broth. Samples should ideally be obtained by aspiration to avoid insufficient sample amount usually seen with swabbing techniques. Antibiotic therapy is not the same for both species; therefore sensitivity testing must be done to guide treatment. Our case was interesting because of the long incubation period required for growth with only the initial cultures becoming positive. These species require special media in order to expedite growth and identification; the diagnosis can be delayed if cultures are done on typical media. Therefore awareness of these mycobacterium species should warrant the consideration of special media whenever peritonitis in CAPD is suspected.

**References**


