We present a case of an 84-year-old man with a history of advanced Alzheimer’s disease who was brought in after an episode of syncope in the setting of having a bowel movement. Evaluation was remarkable only for a positive urinalysis and a urine culture that ultimately grew >100,000 CFU/mL pan-sensitive Aerococcus urinae species. The patient was discharged on oral cefpodoxime with a diagnosis of vasovagal syncope and a urinary tract infection related to a relatively under-recognized organism.

Aerococcus urinae is a Gram-positive, catalase-negative bacterium that grows in clusters, often appearing in colonies that resemble Streptococcus viridans (1). Its genus was first described in 1953, with the first reported case of A. urinae in a human described in 1992 (1,2). Several other species in the Aerococcus genus have been identified, including the pathogenic A. sanguinicola and the less-pathogenic A. christensenii and A. urinachrominus (3-5). While rarely recognized in the past, A. urinae has become more commonly isolated in bacterial cultures, as bacterial detection has improved (6). It has noted to be often confused with several other bacterial genera, including Streptococci, Staphylococci, and Enterococci (7). In fact, one study showed that in a series of 820 isolates thought to be Streptococci species, 1% was found to be Aerococcus species on further evaluation (8). Preliminary studies by Rasmussen et al. showed that the true incidence of Aerococci infections could be seven times that than previously described (7). Genomic sequencing and mass spectrometry are the most sensitive modalities for detection of A. urinae, although many lower-resource clinical settings may not have access to this technology (9).

The organism has been implicated most commonly as a cause of urinary tract infection but cases of endocarditis and sepsis have been reported (6,10,11). The incidence of Aerococci species isolated from urinary cultures is generally believed to range from 0.2%-0.8%; of these patients, it is unclear the proportion of which present symptomatically, with reported figures is generally believed to range from 0.2%-0.8%; of these patients, it is unclear the proportion of which present symptomatically, with reported figures of 55%-65% (14,16,17). As with most UTIs, A. urinae is seen more commonly in elderly patients (12-16). One study showed that 67.5% of infected patients had underlying systemic diseases (12). Several other types of infection due to A. urinae, as well as other Aerococcus species, have been described, including peritonitis, osteomyelitis, dental, joint, and soft-tissue infections (6,19-20). While these cases are less common than UTI and endocarditis due to A. urinae, providers need to be aware of this pathogenic organism.

A. urinae is a pathogen that is much more common than previously described. Fortunately, it is generally sensitive to a number of antibiotics including beta-lactams, cephalosporins and carbapenems (27). Rasmussen suggests ampicillin as a drug option of choice for sepsis from a urinary tract infection (7). Unfortunately, there has been little investigation of treatment options in clinical trials, but in vitro studies have offered insight into treatment options for patients with A. urinae infections. Our patient exhibited a typical presentation for A. urinae infection, and in an ever-growing elderly population, knowledge and recognition of this potential pathogen is of increasing importance.

REFERENCES


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