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Myroides odoratus as an unusual urinary tract infection pathogen in immunosuppressed patient

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Article history

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Sir,

Myroides odoratus is an aerobic, oxidase-positive, gram-negative rod commonly found in humid environments. This microorganism was previously recognized as *Flavobacterium odoratum*, until 1996 when it was reclassified into the new genus *Myroides* [1]. It is a rare pathogen that affects mainly to patients with indwelling devices [2] or immunocompromised [3,4], and mostly produces urinary tract infections and bacteremia[5].

A 66-year-old male, resident in Granada, Spain, with a history of prostate cancer and bone metastasis came to the emergency department due to urinary symptoms, without episodes of fever. The urine reagent strip indicated the presence of nitrites, leukocytes and red blood cells. The indwelling catheter was replaced, a urine culture was ordered and was prescribed fosfomicin 500 mg /8h for 8 days.

Urine sample was inoculated in CPSO chromogenic medium (Biomerieux®, Marcy L'Etoile, France) and blood agar incubated for 24 hours in a 37°C atmosphere. After the incubation time, a pure culture count of >100,000 CFU/ml of a yellowish colony was observed (Figure 1). Identification of the microorganism was performed by mass spectrometry, MALDI-TOF (Bruker®, Bremen, Germany). *M. odoratus* was obtained with a score of 2,29. The identification was confirmed by the partial sequencing of 16S rRNA gene. This isolate shared 100% sequence similarity with the reference sequence of *M. odoratus* available in GenBank (MT367748.1).

Antibiotic susceptibility test was carried out by automated microdilution broth test (Vitek2, Biomerieux) and interpreted following CLSI M100 guidelines (2021), using the minimum inhibitory concentration (MIC) breakpoints of other non-*Enterobacteriaceae*.

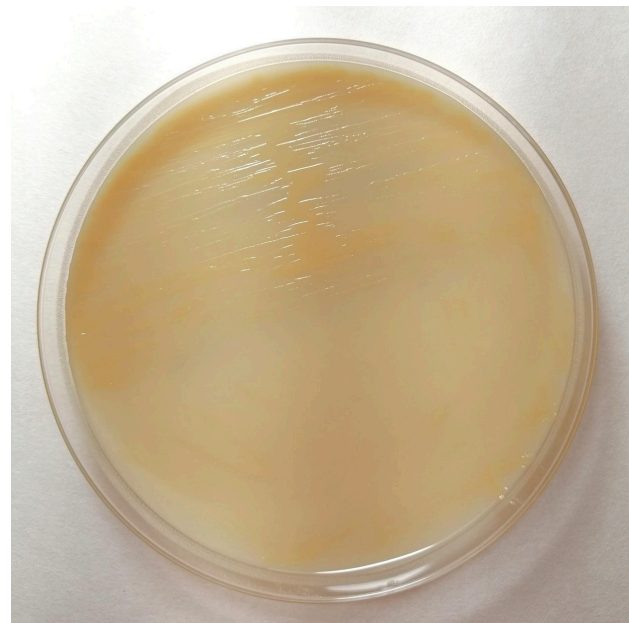


Figura 1 Colonies of *M. odoratus* grown in CPSO® chromogenic agar (Biomerieux®).

The susceptibility profile reported was as follows: susceptible to levofloxacin (MIC < 0.5 mg/L), ciprofloxacin (MIC =1 mg/L) and sulfamethoxazole/trimethoprim (MIC ≤2/76 mg/L), and resistant to piperacillin/tazobactam (MIC>128 mg/L), ceftazidime (MIC ≥64 mg/L), aztreonam (MIC ≥64 mg/L), imipenem (MIC ≥16 mg/L), meropenem (MIC ≥16 mg/L), gentamicin (MIC ≥16 mg/L), tobramycin (MIC ≥16 mg/L), amikacin (MIC ≥64 mg/L), and fosfomicin (MIC ≥32 mg/L). The patient was treated with sulfamethoxazole 800 mg/trimethoprim 600 mg/12 h for 7 days. He responded favorably to treatment and had no further symptoms. No new post-treatment control sample was sent.

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M. odoratus is an emerging uropathogen mainly in immunosuppressed and bladder catheters patients. Accurate identification methods and antibiotic susceptibility are essential for the correct management of these patients.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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