**Myroides Species: A Rare Cause of Endocarditis**

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*Myroides* species are not part of human flora and are commonly found in soil and water. They are considered as low-grade pathogens. Genera *Myroides* are members of the family Flavobacteriaceae and comprise a group of yellow-pigmented, oxidase positive, non-motile, non-fermentative Gram-negative bacilli. However nowadays, they have been identified as causative agents in urinary tract infections, pneumonia, meningitis, fasciitis, and ventriculitis in immunocompromised patients, and a few life-threatening infections have been reported in immunocompetent individuals also. We present a case 32-year-old female known the case of rheumatic heart disease that underwent valve replacement around 17 years back. She was admitted with complaints of breathlessness since 3 days in an emergency for evaluation. She underwent redo mitral valve replacement. Intraoperatively, vegetations were present on the mitral valve. Subsequently, her blood culture grew *Myroides* spp. She responded well to treatment and discharged.

**Keywords:** Myroides spp, Flavobacteriaceae, Endocarditis

### INTRODUCTION

*Myroides* species previously known as *Flavobacterium odoratum* are a rare source of human infections. Natural habitat includes soil, fresh and marine waters, foods, and sewage treatment plants.¹ This case is presented to show the increasing incidence of uncommon isolates causing endocarditis. Isolation of such organism is of clinical significance due to its high resistance to the commonly used antibiotics.

### CASE REPORT

The patient is a 32-year-old female non-diabetic known case of rheumatic heart disease undergone mitral and aortic valve replacement about 17 years back. She presented with complaints of breathlessness on walking and lying position in emergency. She was investigated and found to have stuck valve.

- After proper investigation and work up she underwent mitral valve replacement. Vegetations were present on the mitral valve intraoperatively.
- Postoperatively patient was put on inotropic support.

- She developed high total leukocyte count (TLC), fever for which blood culture, urine culture were send. Empirically she was put on injection meropenem and injection teicoplanin. Her blood culture grew *Myroides* spp. Then, targocid was discontinued, and meropenem was continued for 21 days as per the sensitivity report. She responded well. Subsequent blood cultures were negative.

**Investigation**

**Routine investigation**

Normal except high TLC count, procalcitonin = 12.21.

**Echocardiography**

Stuck mitral valve. Mean pressure gradient = 42 mmHg. Good bolus across aortic valve. No clot, vegetation.

**Blood culture**

Two sets of blood culture were sent. Positive signal came after 12 h of aerobic incubation in BacTAlert system. Gram-stain showed Gram-negative bacilli.

**Macroscopic features**

On blood agar plate, colonies were round, non-hemolytic yellow-pigmented about 1-2 mm in size (Figure 1), it gives characteristic fruity odor. No growth on Macconkey agar.

Identification of species: The organism was a catalase- and oxidase-positive. Further identification was done using VITEK 2 compact, BioMe´rieux - which identified it as *Myroides* sp. (excellent Identification).
Although *Myroids* spp. are rare clinical isolates, it has been found to be associated with various clinical infections ranging from recurrent cellulitis, post-operative wound infections, and necrotizing fasciitis to severe septicemia.³

• Cases of endocarditis and ventriculitis have also been reported by Maraki *et al.*⁴

• *M. odoratimimus* bacteremia was reported by Endicott-Yazdani *et al.*, in a diabetic patient who was responding to injection meropenem.⁵

Multi-drug resistant nature makes identification and antibiotic susceptibility testing very important. Resistance to β-lactams mainly due to the production of chromosomally encoded metallo-β-lactamases (TUS-1 and MUS-1) has been reported by Mammeri *et al.* Clinical isolates of *Myroids* had been found to be susceptible to quinolones and trimethoprim-sulfamethoxazole, and the clinical cure was attained in few studies.

Our case differs from other reported case in that it was not multidrug resistant and we could not identify the source of infection.

**CONCLUSION**

*Myroids* spp. infections are being increasingly reported in both immunocompromised and immunocompetent hosts. This case highlights the fact that a rare pathogen like *Myroids* spp. should be considered in differential diagnosis of endocarditis and clinicians must be aware of its pathogenic role.

**REFERENCES**


