Serratia marcescens

- Bacteriological Profile of Patients With Stroke-Associated Pneumonia and Antimicrobial Susceptibility of Pathogens: A Cross-Sectional Study
- Intramedullary spinal cord abscess as postoperative complication: A case report
- Rare post-operative intracranial abscess due to Serratia marcescens: what we can learn from it?
- Differences in microorganisms causing infection after cranial and spinal surgeries
- Genomic epidemiological investigation of an outbreak of Serratia marcescens neurosurgical site infections associated with contaminated haircutting toolkits in a hospital barber shop
- Neonatal Brain Abscess with Serratia marcescens after Intrauterine Infection: A Case Report
- Spontaneous Cervical Epidural Abscess Caused by Serratia Marcescens
- Bedside ultrasound to detect bone flap infections: A case image

Serratia marcescens is often associated with opportunistic infections in humans. Serratia marcescens can cause a variety of infections, particularly in hospital settings, including:

Urinary Tract Infections (UTIs): Often seen in patients with indwelling catheters. Respiratory Infections: Such as pneumonia, especially in immunocompromised individuals. Wound Infections: Including surgical site infections. Bloodstream Infections: Leading to sepsis, particularly in individuals with weakened immune systems. Serratia marcescens is notorious for its antibiotic resistance, making it a challenging pathogen to treat. Infections caused by Serratia marcescens require careful management, often involving the use of specific antibiotics based on susceptibility testing.

Key Points:

Morphology: Serratia bacteria are rod-shaped and typically measure about 1-5 micrometers in length.

Pigment Production: The red pigment, prodigiosin, is produced by some Serratia species, particularly at lower temperatures (20-30°C).

Pathogenicity: Although Serratia species can be found in the environment, certain strains are pathogenic, especially in nosocomial (hospital-acquired) settings.

Antibiotic Resistance: Serratia marcescens is known for being resistant to multiple antibiotics, complicating treatment strategies.

In summary, while Serratia species are widespread in nature, their clinical significance lies in their role as opportunistic pathogens, particularly in healthcare environments.

Serratia marcescens is a rare pathogen of central nervous system infections.

S. marcescens meningitis is highly associated with neurosurgical procedures for brain solid tumors. CSF lactate concentration ≥2x ULN may predict an unfavorable outcome. Its mortality is not high and empiric treatment with parenteral third-generation cephalosporins may have a satisfactory clinical response [1].

Infection associated with ventriculoperitoneal (VP) shunt implantation can be a significant problem. VP shunt infection with Serratia marcescens, a gram-negative anaerobic rod, usually is related to underlying abdominal disease. A article describes treatment of two patients suffering from a VP shunt

infection with S. marcescens without underlying abdominal disease [2].

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Wu YM, Hsu PC, Yang CC, Chang HJ, Ye JJ, Huang CT, Lee MH. Serratia marcescens meningitis: epidemiology, prognostic factors and treatment outcomes. J Microbiol Immunol Infect. 2013 Aug;46(4):259-65. doi: 10.1016/j.jmii.2012.07.006. Epub 2012 Aug 24. PubMed PMID: 22926070.
2)
Esmaeilzadeh M, Islamian AP, Lang JM, Hornef M, Suerbaum S, Krauss JK. An unusual cause of ventriculoperitoneal shunt infection. JAAPA. 2015 Aug;28(8):39-42. PubMed PMID: 26208014.