

First Reported Case of Chryseobacterium gleum Urinary Tract Infection in a Pregnant Woman

Yehia El khawly, Morounfolu Thompson , Lolwa Alansari , Masautso Chaponda, Sufia Athar

Introduction

This case report describes the first documented instance of Chryseobacterium gleum causing a urinary tract infection in a pregnant woman.

Case Description

A pregnant woman presented with symptoms of urinary tract infection. Microbiological testing identified Chryseobacterium gleum as the causative pathogen, which has not been previously reported in pregnancy. A 28-year-old primigravida at 29 weeks of gestation presented with classic UTI symptoms, including dysuria and lower pelvic pain. Urine culture identified multidrug-resistant Chryseobacterium gleum, an environmental gram-negative, non-fermenting bacterium rarely associated with human infections.The patient received intravenous piperacillin/tazobactam for five days. Clinical and microbiological resolution was achieved, as confirmed by symptom resolution and negative repeat urine cultures. Both maternal and fetal conditions remained stable throughout treatment.

Discussion

C. gleum is primarily environmental but can act as an opportunistic pathogen, particularly in immunocompromised hosts. Its isolation in pregnancy presents unique challenges due to immunological adaptations and the limited safety profile of antibiotics for maternal-fetal health. This case highlights the necessity for accurate identification and sensitivity-guided therapy in managing atypical pathogens in pregnancy.

Given its multidrug resistance, empiric therapy may be inadequate, underscoring the role of antimicrobial stewardship in tailoring treatments. This case also highlights the need for heightened vigilance in identifying nosocomial sources, as C. gleum thrives in hospital water systems.

Conclusions

This report is the first to describe C. gleum as a causative agent of UTI in a pregnant woman. It underscores the importance of:

- Recognizing rare pathogens in pregnancy-associated infections.
- Prompt susceptibility-based therapy to ensure maternal-fetal safety.
- Investigating potential environmental reservoirs to prevent future infections.

Future research should focus on the clinical epidemiology of C. gleum infections in pregnancy and the development of standardized treatment guidelines for multidrug-resistant, atypical pathogens.

Feature	Details
Organism	Chryseobacterium gleum
Type	Gram-negative, non-fermenting rod
Habitat	Hospital water systems
Resistance	Multidrug-resistant, beta-lactam resistant
Clinical Concern	Rare in pregnancy, limited treatment options