

Pantoea Species - A Rare Cause of CLABSI in Haemodialysis Patient

Dr. Parag Panara¹, Dr. Kiran Katara², Dr. Hemal Sarvaiya³, Dr. J. S. Shah⁴

¹Resident, Department of General Medicine, C. U. Shah Medical College, Surendranagar (*Corresponding Author*)

²Resident, Department of General Medicine, C. U. Shah Medical College, Surendranagar

³Associate Professor, Department of General Medicine, C. U. Shah Medical College, Surendranagar

⁴Professor, Department of General Medicine, C. U. Shah Medical College, Surendranagar

Abstract: *There has been a significant increase in nosocomial infections in Intensive Care Units. Sepsis is a major cause of morbidity and mortality in chronic kidney disease patients. In hemodialysis patient, central venous catheter related blood stream infections are major cause for concern. Most common organisms isolated are Gram positive which usually respond to antibiotics and sometimes needing catheter removal. However Pantoea Species have been rarely reported as causative agent of CVC sepsis. Herein we report a case of Pantoea species Causing CVC sepsis in hemodialysis patient.*

Keywords: CLABSI, Haemodialysis, Pantoea Species

1. Introduction

There is a significant burden of nosocomial infections in Intensive Care Units. Patients with immunocompromising conditions often present with subtle and misleading clinical signs and symptoms, making it difficult to identify the source of the infection. *Pantoea agglomerans* is a gram negative bacillus, member of Enterobacteriaceae family that inhabits plants, soil, water; they have been reported as both commensal and pathogen of animals and humans(1). Septic arthritis & synovitis are the most common infections caused by *P. agglomerans*.

2. Case History

A 61-year-old man with k/c/o HTN, DM-II and CKD-stage V presented to the emergency department with complaints of

medium grade fever with chills for 2 days. He also had reduced oral intake, altered sensorium, and hypotension. He has decreased urine output since 3 days. Tachypnea was present but he became more breathless after few hours and BiPAP was required for adequate perfusion. Pedal oedema were pitting and non tender. He also had productive expectoration.

Clinical Presentation

Patient is conscious but drowsy, not well oriented to time place person. He was having 112 pulse per minutes, 88/46mmHg blood pressure in right brachial artery, 86% sPo₂. On auscultation, bilateral coarse crepitations were heard. He was febrile with 100 degree F. And had 2-3 fever spikes per day. Respiratory rate was 32times/min. He had right jugular central venous catheter.

Investigations

CHARACTER	18/9/19	20/9/19	22/9/19	10/10/19
HEMOGLOBIN (g/dl)	11.4	10.3	9.7	8.7
TOTAL LEUCOCYTE COUNT (per cubic mm)	28,700	16,600	14,100	11,600
PLATELET COUNT (per cubic mm)	2,27,000	1,65,000	2,35,000	4,12,000

S. Creat: 8.9mg/dl

Urine routine shows 20-25pus cells.

Rbs: 225mg/dl

After alternate day dialysis, s. creat level decreased to 2.1mg/dl.

Na⁺ : 124.4 mEq/l

K⁺ : 5.9 mEq/l

3. Treatment

Volume 11 Issue 10, October 2022

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

He was started on Ceftazidime. He was continued on slow low efficiency dialysis alternate day. After 3 days of incubation *Pantoea* sp. was identified by Vitek system of blood. All isolates were consistently sensitive to Cefepime, Cefoperazone sulbactam, ceftazidime, Quinolones, Dorepenum while they were intermediately sensitive to Amoxicillin-Clavulanate and Cefuroxime. His repeat blood cultures (sent after 1 week of completion of antibiotics) were negative. His IV antibiotics were continued for a total of 14 days. He was discharged in hemodynamically stable state and was on regular follow up for hemodialysis alternate days.

4. Diagnosis

From our results we conclude that *Pantoea* sp. is able to cause CVC sepsis, however the source of these *Pantoea* infections remains to be investigated in this case.

5. Discussion

From our results we conclude that *Pantoea* sp. is able to cause CVC sepsis, however the source of these *Pantoea* infections remains to be investigated. *P. agglomerans* has been reportedly found in samples obtained from cotton swabs, intra-arterial devices, as well as plants and plant materials. *P. agglomerans* has been reported to survive some steps of the autoclaving process. Intrinsic susceptibility of *P. agglomerans* to beta-lactam antibiotics, might be the reason for the limited number of reports on *Pantoea* outbreaks. Central Line areas of bodies should be kept aseptic in order to prevent life threatening septicemia.

6. Conclusion

No specific treatment is available but management of alcohol related problems and intravenous injections combined with vitamin B12 and thiamine have been reported to be beneficial. It should be differentiated from 1) paraneoplastic encephalomyelitis 2) Pick disease. Neurologist, psychiatrist and psychologist are required for combined efforts for treatment and alcohol withdrawal. Along with Thiamine, vit B12 and immunosuppressants, role of Amantadine is under study.

References

- [1] Harrison's 19th edition
- [2] American journal of neurology