RARE CRBSI IN DIALYSIS ACCESS

Abhijit Yeul, Hardik Shah, Asmita Sakle, Shrirang Bichu, Dilip Kirpalani, Satarupa Deb. Ashok Kirpalani

BOMBAY HOSPITAL INSTITUTE OF MEDICAL SCIENCES, MUMBAI

ABSTRACT NO: WCN25-AB-2011

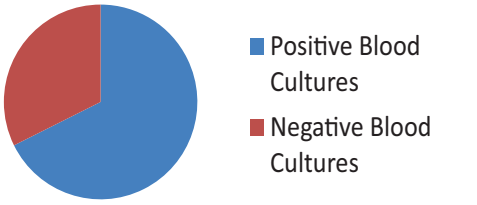
INTRODUCTION

Emergence of newer pathogens with multi drug resistance causing catheter related blood stream infections (CRBSI) has wreaked havoc in dialysis population. Ubiquitous presence of these organisms in disinfectant solutions, surfaces and water in dialysis units can pose a hidden danger.

METHODS

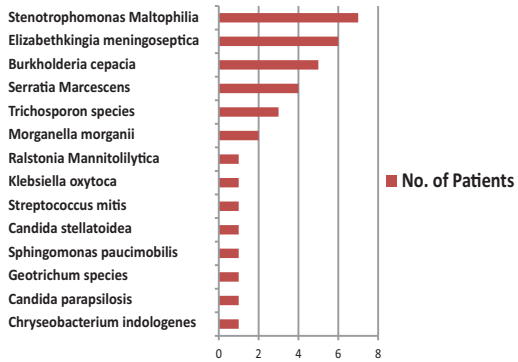
Retrospective analysis of positive blood cultures from Jan 2022 till May 2024 from dialysis access devices of hospitalized dialysis patients was done and data was analyzed.

PATTERN OF BLOOD CULTURES



Out of 231 positive blood cultures from dialysis access devices , 34 (14.7%) had uncommon organisms. 11/34 had negative blood cultures from outside lab prior to hospitalization.

NO. OF PATIENTS WITH UNCOMMON ORGANISIMS



SALVAGE RATE OF CATHETERS

TYPE OF CATHETER	TUNNELLED CUFFED CATHETER	NON TUNNELLED CATHETER	CAPD CATHETER
TOTAL	28	5	1
SALVAGED	24	0	0
REMOVED	4	5	1

CONCLUSION

- "Uncommon" organisms residing in "usual" surroundings are likely to increase morbidity and mortality in dialysis patients.
- Active surveillance, high index of clinical suspicion and state of the art diagnostic facilities for identification of uncommon organisms is needed for early detection and timely management of CRBSI in dialysis patients.

NEW KIDS ON THE BLOCK

Nearly 90% of these "Newer" organisms showed resistance to broad spectrum higher antibiotics including linezolid, teicoplanin, carbapenems, higher generation cephalosporins and even colistin .

Stenotrophomonas Maltophilia

Gram Negative Bacillus, due to contaminated o-rings inside dialyzer and contaminated water for processing dialyzer.
Access: TCC

Elizabethkingia Meningoseptica

Gram Negative Bacillus, due to indwelling medical divices.
Access: TCC

Burkholderia Cepacia

MDR Gram Negative Bacillus, due to hemodialysis fluids and equipments and RO water.
Access: TCC

Serratia Marcescens

Rod shaped Gram Negative Bacillus due to dialysis equipments.
Access: TCC, Non TCC

Trichosporon Species

Anamorphic fungii due to immunocomprised patient.
Access: TCC

Morganella Morganii

Gram Negative Bacillus of enterobacteriaceae species.
Access: TCC

Ralstonia Mannitolilytica

Gram Negative Rod due to contaminated solution including water for injection, saline solution, disinfectant, antiseptics, forms biofilm.
Access: Non TCC

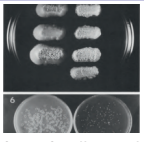
Klebsiella Oxytoca

Gram Negative Rod due to container used to collect flush solution after priming of dialysis tubing that remained unemptied for extended time period.
Access: Non TCC

Streptococcus Mitis

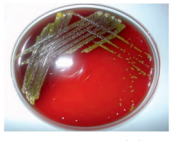
Mesophilic alpha hemolyti species of Streptococcus.
Access: TCC

Candida Stellatoidea



Mutant form of C-albicans that does not have sucrose inhibitable alpha glucosidase activity.
Access: TCC

Sphingomonas Paucimobilis



Gram Negative Rod due to intravascular instrumentation.
Access: TCC

Geotrichum Species

Acid tolerant yeast like fungus.
Access: TCC

Candida Parapsilosis

Yeast like fungus due to contaminated water from dialysis centre.
Access: CAPD Catheter

Chryseobacterium Indologenes

Gram Negative Rod due to intravascular instrumentation.
Access: TCC