

## CATHETER INFECTIONS CAUSED BY RALSTONIA INSIDIOSA

### SINGLE CENTER EXPERIENCE

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#### BACKGROUND:

Our dialysis unit is a part of regional hospital in Czech Republic. We take care about approx. 100 hemodialysis patients.

During 14 weeks (January – April 2011) 8 cases of central venous catheter infections caused by *Ralstonia Insidiososa* were observed. All isolates had similar antibiotics sensitivity to beta-lactams and fluoroquinolones and were resistant to aminoglycosides.

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#### CONCLUSION:

Small epidemics of eight cases of central venous catheter infections caused by *Ralstonia Insidiososa* was observed in single dialysis center. Conservative treatment was successful in all patients, no catheter removal was necessary. Epidemiological evaluation failed to demonstrate source of infection.

#### OBSERVATION:

Similar pattern was observed in all cases: temperature elevation, chills or shivers during or shortly after dialysis sessions, no symptomatology between dialysis sessions and only mild laboratory signs of infection. This is compatible with microbial colonisation of lumen of central venous catheters. Only patients with permanent central venous catheters were affected.

Conservative treatment was elected in all cases:

Switch to citrate 46,7% catheter locks only (6 patients),

Systemic Amoxicillin – clavulonate + switch to citrate 46,7% catheter lock.

(1 patient)

Systemic ciprofloxacin + switch to antibiotic catheter locks (heparin + ciprofloxacin)

(1 patient)

No catheter extraction was necessary, eradication of catheter infection in all cases was confirmed by repeated cultivations.

Comprehensive epidemiological evaluation was performed with intention to find origin of infection. Detailed microbiological examinations of all used dialysis tools, drugs (heparin, gentamycin), crystalloid infusion solutions, disinfectants were negative. Water treatment station and permeate circuit was also carefully examined with no results. No definite source of infection was demonstrated.

#### DISCUSSION:

*Ralstonia Insidiososa* was described as potential origin of epidemics in nosocomial settings including dialysis units. Source of infection can be contaminated materials, infusion solutions, drugs or water. [2-6] Also pseudoepidemics caused by contaminated cultivation medias or disinfectants were described.[5] *Ralstonia Insidiososa* was cultivated from water reservoirs [9,10], distilled water [2,6] and intravenous solutions (eg. water for injections, heparin).[5,7] Colonisation of indwelling intravenous catheters can cause bloodstream infection with or without symptoms of sepsis.[8]

In our case infection source was not identified. All therapeutic and hygiene standards were satisfactory. We cannot exclude contamination of some material or drug consumed before initiation of microbiological evaluation.

#### LITERATURE:

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Number of HD patients during epidemics	104
Number of affected patients	8 ( 3 M, 5 F) attack rate 7,7%
Total number of patients with permanent catheter.	26 attack rate 31%.
Time from catheter insertion (month)	13,6 ( 0-48)
Catheter locks	5 x Citrate 4%, 3 x Heparin
CRP (mg/l)	6,4 ( 1,4-20)