Abstract:

OBJECTIVE: To determine the difference in the rates of dialysis events stratified by vascular access type and to describe the microbiological profile and sensitivity patterns of positive blood cultures over a 3-year period.

SUBJECTS AND METHODS: The dialysis event data of 10751 chronic hemodialysis patients collected from March 2013 to February 2016 at an Outpatient Dialysis Unit in Kuwait were reviewed. The dialysis events studied were; use of intravenous (IV) antimicrobials, positive blood culture and signs of inflammation at the vascular access site. Dialysis event rates were stratified by the type of vascular access used for the dialysis: fistula, graft, tunneled or non-tunneled central line. Rates were expressed per 100 patient-months.

RESULTS: The overall dialysis event rate was (10.7/100 patient months). The IV antimicrobials event rate was highest (12.53/100 patient months) among patients with tunneled central lines compared to the other vascular access types (10.29/100 patient months). Positive blood culture and event rates of inflammation at the vascular access site were highest among patients with non-tunneled central lines (1.65 and 1.54/100 patient months respectively) as compared to other types of vascular access. Gram-negative rod isolates were predominant in patients with central lines n =35(46.67%); however common skin commensals and Gram-negative rods were also equally identified among patients with fistula or graft n=4(44.45%).

CONCLUSION: Dialysis event rates were higher among patients with tunneled or non-tunneled central lines in comparison to patients with fistula or graft. Gram-negative rods were the
most commonly isolated microbial group.

Reference:

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