



Intravenous literature: Mer, M., Duse, A.G., Galpin, J.S. and Richards, G.A. (2009) Central venous catheterization: a prospective, randomized, double-blind study. *Clinical & Applied Thrombosis/Hemostasis*. 15(1), p.19-26.

Abstract:

Central venous catheters (CVCs) are extensively used worldwide. Mechanical, infectious and thrombotic complications are well described with their use and may be associated with prolonged hospitalization, increased medical costs and mortality. CVCs account for an estimated 90% of all catheter-related bloodstream infections (CRBSI) and a host of risk factors for CVC-related infections have been documented. The duration of use of CVCs remains controversial and the length of time such devices can safely be left in place has not been fully and objectively addressed in the critically ill patient. Antimicrobial-impregnated catheters have been introduced in an attempt to limit catheter-related infection (CRI) and increase the time that CVCs can safely be left in situ. Recent meta-analyses concluded that antimicrobial-impregnated CVCs appear to be effective in reducing CRI. The authors conducted a prospective, randomized, double-blind study at Johannesburg Hospital over a 4-year period. The study entailed a comparison of standard triple-lumen versus antimicrobial impregnated CVCs on the rate of CRI. Our aim was to determine whether we could safely increase the duration of catheter insertion time from our standard practice of seven days to 14 days, to assess the influence of the antimicrobial impregnated catheter on the incidence of CRI, and to elucidate the epidemiology and risks of CRI. One hundred and eighteen critically ill patients were included in the study which spanned 34 951.5 catheter hours (3.99

catheter years). It was found that antimicrobial catheters did not provide any significant benefit over standard catheters, which the authors feel can safely be left in place for up to 14 days with appropriate infection control measures. The most common source of CRI was the skin. The administration of parenteral nutrition and the site of catheter insertion (internal jugular vein vs subclavian vein) were not noted to be risk factors for CRI. There was no clinical evidence of thrombotic complication in either of the study groups. This study offers direction for the use of CVCs in critically ill patients and addresses many of the controversies that exist.

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