

Bactiguard® coated CVC Publication Summary

Goldschmidt *et al.* 1995, Prevention of Catheter-related Infections by Silver Coated Central Venous Catheters in Oncological Patients.

Harter *et al.* 2001, Catheter Related Infection and Thrombosis of the Internal Jugular Vein in Hematologic-Oncologic Patients Undergoing Chemotherapy.

Patients

Goldschmidt and Harter are two publications from the same study at the department of internal medicine V, University of Heidelberg. The focus of Goldschmidt was to investigate the incidence of catheter-related infections and Harter studied any risk of thrombus formation, both in patients receiving silver-alloy (Bactiguard®) coated compared to non-silver-coated CVCs. The study was performed on adult patients with hematologic-oncologic disease. Exclusion criteria were catheterization for less than 48 hours, second central venous access, existing severe infection, current catheter related infection, pregnancy and age under 18.

Methods

This randomized prospective controlled study was designed to compare catheter-related infections between patients receiving standard, non-coated CVCs and patients receiving silver-alloy (Bactiguard®) coated. Thrombosis was analysed and published subsequently. The Seldinger technique was used. Over a 17-month period 233 CVCs were evaluated, of which 113 were standard, and 120 Bactiguard coated.

Results

found that catheter related infections (CRI) developed in 21.2% of the patients receiving an uncoated catheter but only 10.2% of patients receiving the Bactiguard coated, thus, catheter related infections were significantly less in the Bactiguard coated group ($p=0.011$). Reduction in number of patients affected by local catheter infection and catheter related bacteremia is also shown in figure to the right. Harter found 3 cases of thrombosis in the uncoated group and 1 in Bactiguard

coated group and no statistical difference in the incidence of thrombosis between patients with Bactiguard coated and uncoated.

Conclusions

The overall conclusion was that the use of the Bactiguard coated CVC did not demonstrate any increased risk of thrombosis formation and at the same time a significantly ($p=0.011$) lower rate of catheter associated bloodstream infections in oncological patients.

References:

Goldschmidt *et al.* 1995, Prevention of catheter related infections by Silver coated central venous catheters in Oncological Patients. *Zbl. Bact.* 283, 215-223.

Harter *et al.* 2002, Catheter-related infection and thrombosis of the internal jugular vein in hematologic-oncologic patients undergoing chemo-therapy: A prospective comparison of silver-coated and

