

The main objective was to investigate the feasibility of using the femoral vein for long-term venous access” Coulson et al (2016).

Abstract:

OBJECTIVE: The main objective was to investigate the feasibility of using the femoral vein for long-term venous access. This was accomplished in the course of treating osteomyelitis patients, using a combination of long-term (6 weeks), outpatient, intravenous (IV) antibiotics administered through a femoral central line. This was combined subsequently with the use of hyperbaric oxygen (HBO) therapy. Using the femoral vein for central venous access means there is no risk of creating an iatrogenic pneumothorax, which would prohibit the subsequent use of HBO therapy. In addition, the propitious nature of the groin skin flora, Propionibacteriaceae, seems less inclined to participate in biofilm production, the root cause of central line infections.

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METHODS: The femoral central lines were all inserted in the operating room (OR) and handled like a regular outpatient surgery with a meticulous skin prep completed by experienced OR nurses. Experienced technicians assisted with the surgery. After insertion, the lines were then specially secured to prevent sliding. Vancomycin was administered preoperatively.

RESULTS: Surprisingly, femoral lines placed in this way remained free of infection for up to 70 days. Eight patients with Wagner stage 2 ulcers and underlying osteomyelitis were treated with a course of 6 weeks of vancomycin, followed by HBO therapy. A cure rate of 75% was achieved.

CONCLUSION: Femoral vein cannulation for antibiotic administration is safe and effective in treating patients with osteomyelitis. The lines should be placed in the OR with the help of skilled personnel. Femoral cannulation avoids the risk of pneumothorax, and the lines can be used for up to 70 days. By avoiding pneumothorax, the patients remain candidates for HBO therapy.



Reference:

Coulson, A., Peek, A. and Haugen, D. (2016) Femoral Vein Cannulation in the Treatment of Osteomyelitis. Wounds. 28(6), p.194-199.

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