The DermaPort™ system can be effectively implanted and facilitates catheter interventions in hemodialysis patients requiring long-term catheter use and has a lower infection rate than historical catheter infection rates" Rajan et al (2018).

Abstract:

INTRODUCTION: Dysfunctional or infected hemodialysis polyester-cuffed catheters often require removal and are dissected out. The DermaPort™, percutaneous vascular access system (PVAS) permanently integrates a titanium mesh with the skin forming a stable, sterile barrier that allows for catheter placement, adjustment, or catheter exchange. This study aimed to describe the use and clinical outcomes of the DermaPort PVAS.

METHODS: Thirty-eight patients who were receiving hemodialysis via a tunneled catheter were enrolled in this prospective open-label study. Assessments were performed biweekly for the first month and monthly thereafter, which included physical examination of the site of implantation for infection, catheter blood flow, and need for interventions to maintain catheter patency. Patient satisfaction was assessed with a visual analog score.

RESULTS: Implantation of technical success was 100% with the implantation site demonstrating early tissue incorporation after 2 weeks and full incorporation within 4 weeks. The DermaPort™ successfully enabled 31 catheter exchanges and 10 repositions thru the port without dissection in 18 patients with nine repositions (90%) performed at bedside. The mean primary patency of the DermaPort™ was 172 ± 150 days, and mean secondary patency was 430 ± 203 days. There were no reportable serious adverse events in 12,100 catheter days of use and zero explantations of the device attributed to infection. The observed catheter infection rate was 0.33/1000 days.

CONCLUSIONS: The DermaPort™ system can be effectively implanted and facilitates catheter interventions in hemodialysis patients requiring long-term catheter use and has a lower infection rate than historical catheter infection rates. Clinical Trial Protocol Number DermaPort-001 (no clinicaltrials.gov number as study was performed 9 years ago). Health Canada Reference Application Number: 118393.

Reference:

Rajan, D.K., Moran, B., Lobl, T.J., Asch, M.R., Steele, A.W. and Lok, C.E. (2018) A Prospective Clinical Study of a Percutaneous Vascular Access System for Hemodialysis Catheters. Cardiovascular and Interventional Radiology. July 13th. .

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