To retrospectively evaluate the success rates, peri-interventional, early and late complications and patient satisfaction associated with power-injectable totally implantable venous access devices (TIVAPs)” Kunz-Virk and Krüger (2019).

Abstract:

Background: To retrospectively evaluate the success rates, peri-interventional, early and late complications and patient satisfaction associated with power-injectable totally implantable venous access devices (TIVAPs).

Patients and methods: Between April 2011 and March 2016, a total of 1,203 TIVAPs were implanted in 1,169 patients. Ultrasound-guided, fluoroscopically controlled implantation was performed through the subclavian or internal jugular vein. The systematic analysis focused on the rate of successful port implantations, the frequency of peri-interventional, early and late complications and on how the experience of the implanting radiologist impacts these parameters. Additionally, a standardized questionnaire was administered to the 102 study patients in a telephone interview to survey their subjective rating of the port implantation.

Results: 99.5 % of TIVAPs were implanted successfully. In 4 out of 6 patients, the implantation was repeated successfully at a later time. Complication rates were 1.4 % (0.0512/1.000 catheter days) for peri-interventional, 2.9 % (0.081 per 1,000 catheter days) for early and 8.3 % (0.2288 per 1,000 catheter days) for late complications. The radiologist’s
experience level and vein selection did not have a significant impact. Most peri-interventional complications (82.4 %) were of minor severity. The early (61.5 %) and late (65.6 %) complications were more frequently of major severity. Interventions to manage complications comprised port explanation in 46.9 %, conservative therapy in 17.4 % and interventional therapy in 12.2 %. At 1 and 3 months after port placement, the majority were satisfied or very satisfied with the interventional port implantation.

Conclusions: Ultrasound-guided, fluoroscopically controlled implantation of TIVAPs is a safe procedure with low complication rates, high success rates and high patient satisfaction.

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