The aim of this study was to compare the outcomes after totally implantable venous access ports implantations done by resident and attending surgeons” Schreckenbach et al (2018).

Abstract:

OBJECTIVE: The implantation of totally implantable venous access ports (TIVAPs) is one of the first procedures surgical residents learn. Complications after implantation procedures have a major impact on patient outcomes, as it may lead to a delay of chemotherapy regimens or of parenteral nutrition. The aim of this study was to compare the outcomes after totally implantable venous access ports implantations done by resident and attending surgeons.

DESIGN: The study was performed as a retrospective analysis.

SETTING: The study took place in primary care at the Department of General and Visceral Surgery at Frankfurt University Hospital.

PARTICIPANTS: A total of 760 primary totally implantable venous access ports implantations performed between March 2008 and December 2016 were included in a database. Three groups of surgeons doing the implantations were defined: Group A (residents alone), Group B (resident with help), and Group C (attending surgeons).
RESULTS: There was a significant difference between the surgeon groups in operation time (p < 0.001). The groups differed between Group A (mean, 49; SD, 22) and Group C (mean, 39; SD, 20; p < 0.001) and Group B (mean, 53; SD, 23) and Group C (mean, 39; SD, 20; p < 0.001). The incidence of surgical site infections between Groups A and C (3.6% vs. 0.3%; p = 0.003) and Groups B and C (2.5% vs. 0.3%; p = 0.027) differed also significantly. Based on multivariable logistic regression analysis operation time in minutes (OR, 1.04; 95%CI, 1.03-1.06; p < 0.001) was an independent risk factor for any intraoperative complications. For any postoperative complications younger age of the patient (OR, 0.98; 95%CI, 0.97-0.99; p = 0.004) and benign primary disease (OR, 3.25; 95%CI, 1.55-6.64; p = 0.002) were independent risk factors based on multivariable regression analysis. Based on multivariable regression analysis a lower body mass index of the patient (OR, 0.93; 95%CI, 0.86-0.99; p = 0.044), benign primary disease (OR, 2.89; 95%CI, 1.07-7.79; p = 0.036), and no chemotherapy (OR, 3.55; 95%CI, 1.50-8.39; p = 0.004) were independent risk factors for postoperative catheter infections. Surgeon group was no risk factor, neither for intraoperative and postoperative complications, nor for catheter explantation due to complications.

CONCLUSION: Residents performing alone or residents performing with help can safely handle a central venous access port implantation. In patients with several risk factors, however, an attending should assist.

Reference:

Safety Level of Total Central Venous Access Port Implantation Performed by Residents. Journal of Surgical Education. August 14th.