VasQ™ device improves functionality of arteriovenous fistulas: Randomized-controlled study

N. Karydis
Guys hospital; Great Maze Pond, London, UK

Despite its clear benefits, early failure occurs in over 40% of surgically created fistulas. VasQ, a novel external support device designed to optimize anastomosis geometry, regulate flow patterns, and supports the venous wall, thereby facilitating fistula maturation and patency. The following are results of a multinational prospective, randomized-controlled study which includes 40 Device and 20 control patients, assessing VasQ™ safety, usability and effectiveness in patients requiring new Brachio-Cephalic Fistula (BCF). Device implantation easily integrated with the routine fistula procedure. All patients were free from any device related complications. Higher functional maturation rates were observed for patients implanted with VasQ compared to the control group at 3 months (77% vs. 45% p=0.02) and 6 months (88% vs. 50% p=0.02). After 6 months, primary patency rate was 79% device vs. 70% control, and secondary patency was 87% device vs. 70% control. Venous outflow by Doppler at 1 month was 1214ml/min device vs. 1208 ml/min control, 3 months 1426 ml/min device vs. 1174ml/min control, and 6 months 1269ml/min device vs. 1193 ml/min control. Vein diameter at 1 month was 6.7mm for both device and control, 3 months 8.5mm device vs. 6.9mm control (p=0.0044), and 6 months 10.1mm device vs. 8.3mm control (p=0.0115). VasQ™ significantly increased fistula usability for hemodialysis, with superior maturation and patency rates. The improved functionality of the fistula using VasQ™ may be related to decreased stenosis and occlusion events.

Nikolaos.Karydis@gstt.nhs.uk