

## AB032. 174. Contemporary review of bypass surgery in the endovascular era

Ciara Ryan<sup>1,2</sup>, Wael Tawfick<sup>1,2</sup>, Mohamed ElSherif<sup>2</sup>, Mark Curtin<sup>2</sup>, Niamh Hynes<sup>3</sup>, Sherif Sultan<sup>1,2,3</sup>

<sup>1</sup>School of Medicine, National University of Ireland, Galway, Ireland;

<sup>2</sup>Western Vascular Institute, University College Hospital, Galway, Ireland; <sup>3</sup>Galway Clinic, Royal College of Surgeons of Ireland, Galway, Ireland

**Background:** Despite the popularity of endovascular revascularisation, bypass procedures still play an important role in critical limb ischaemia (CLI) management. The study aims to compare outcomes of synthetic versus natural conduits. Primary endpoint is amputation-free survival. Secondary endpoints include clinical success, haemodynamic success, patency rates and overall survival.

**Methods:** Clinical details of patients undergoing lower limb bypass from 2008 to 2016 were reviewed. Outcomes of autologous vein bypass grafts were compared to those of synthetic conduits.

**Results:** Over 8 years, 623 patients were referred with CLI. 105 underwent bypass procedures. All procedures were performed for TASC C/D lesions. Sixty-four bypasses

were performed using a synthetic conduit and 41 using autologous vein. About 95.9% of synthetic bypasses were above the knee and 91.9% of veins were below the knee. Demographics, vascular-related risk factors, lesion length and runoff grading were comparable in both groups. Postoperative major adverse cardiovascular events and major adverse limb events were similar in both groups. Immediate clinical improvement to Rutherford Category  $\leq 3$  was 89.7% in synthetic bypasses *vs.* 70.3% in autologous veins ( $P=0.016$ ). Hemodynamic success with ABI's improving by  $\geq 0.10$  occurred in 87.3% of synthetic bypasses *vs.* 87.1% in vein bypasses ( $P=1$ ). At 5 years, primary, assisted primary and secondary patency were 54.2%, 66.3%, 68.4% respectively. Amputation-free survival was 89.8% with synthetic grafts and 92.7% with veins ( $P=0.472$ ). Overall survival was 62% for synthetic graft patients versus 65.9% with vein graft ( $P=0.406$ ).

**Conclusions:** In patients where autologous veins are unavailable, synthetic bypass grafts still provide acceptable clinical outcomes, with comparable patency and amputation rates.

**Keywords:** Bypass; autologous; synthetic

doi: 10.21037/map.2018.AB032

**Cite this abstract as:** Ryan C, Tawfick W, ElSherif M, Curtin M, Hynes N, Sultan S. Contemporary review of bypass surgery in the endovascular era. *Mesentery Peritoneum* 2018;2:AB032. doi: 10.21037/map.2018.AB032