

J Card Surg. 2014 May;29(3):325-32.

Five-year clinical outcome and patency rate of device-dependent venous grafts after clampless OPCAB with PAS-port automated proximal anastomosis: the PAPA Study.

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Abstract

OBJECTIVE:

To evaluate long-term clinical performance and angiographic patency of automated proximal venous anastomoses following clampless coronary artery bypass (C-CAB).

METHODS:

Observational study in patients submitted for isolated C-CAB and at least one proximal aortosaphenous anastomosis performed with an automated connector (Cardica PAS-Port) including 152 consecutive patients (165 devices and 199 device-dependent distal anastomoses), with LVEF > 30% and saphenous vein diameter of 4-6 mm. Clinical follow-up was 96% complete (4101/4269 pt-months). Graft patency rate was assessed with 64-slice CT-scan or coronary angiography. Freedom from major adverse cardiac and cerebrovascular events (MACCE) was reported as actuarial probability with 95% confidence limits and venous graft patency as actual rate at every year interval.

RESULTS:

Early operative mortality was 1.9%; incidence of neurologic injury was zero. Freedom from MACCE was 92.7 ± 2.1 at one year and 85.2 ± 4.8 at five years. The actual patency rate of device-dependent venous grafts was 90%, 85%, 84%, 84%, and 93% for one-, two-, three-, four-, and five-year-old grafts, respectively.

CONCLUSIONS:

The device is a well-performing system for proximal anastomoses. The incidence of neurologic complications seems to be reduced with this clampless approach. The high patency rate is stable over time.