

May 24-25, 2018
London, UK

Sanjay Singh et al., J Vasc Endovasc Therapy 2018, Volume 3
DOI: 10.21767/2573-4482-C1-002

DOES DUPLEX SURVEILLANCE AFTER FEMORO-POPLITEAL BYPASS GRAFTING AFFECT LONG TERM GRAFT PATENCY?

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Introduction: Duplex scanning is currently the best method to detect stenotic lesions that threaten bypass graft patency. The correction of these lesions may improve long term patency of grafts and limb salvage rates. The aim of this study is to investigate the effects of duplex surveillance post femoro-popliteal bypass graft for chronic limb threatening ischemia (CLTI) in terms of graft patency and limb salvage.

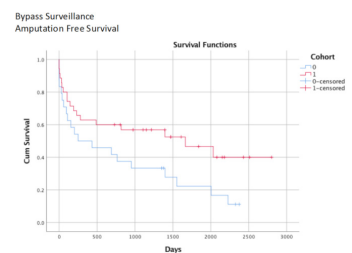
Methodology: A retrospective analysis of 59 patients who had underwent femoro-popliteal bypass graft for CLTI between Jan 2009 and April 2014. Data was collected from the electronic computer record and analyzed using SPSS v24.

Results: Of 59 patients; 49 (83.1%) had autologous vein graft, 8 (13.6%) prosthetic vein grafts and 2 (3.4%) composite graft. Mean follow up was 13.6 (0-64) months. Mean age was 77 (58-96) years. Duplex scan surveillance was performed in 35 (71.4%) patients at 3, 6, 9, 18 and 24 months post operatively; 27 in autologous vein, 7 in prosthetic graft and 1 in composite. Positive findings of occluded graft were noted in 10 duplex scans; all blocked grafts were autologous vein grafts. Out of the 17 patent vein grafts, stenosis was noted in 9 veins requiring angioplasty. Two patients needed amputation after angioplasty. Primary patency at 1 and 2 yrs. for duplex surveillance group was 71.4% and no surveillance group was 54.2%. Within two years 21 patients needed major amputation. Total amputation rate was 35.5%. Ten amputations in patient who were on surveillance were 28.5% and eleven who had no surveillance were 45.8%. At 7 years amputation free survival (AFS) was 48.6% vs. 16.7% in no surveillance group (HR 0.52 95% CI 0.28-0.99 p=0.047); Limb salvage was 71.4% vs. 54.2% (HR 0.57 95% CI 0.24-1.35 p=0.203) and overall survival was 71.4% vs. 33.3% (HR 0.37 95% CI 0.168-0.817 p=0.14).

Conclusion: In our cohort the important clinical outcomes following bypass surgery for chronic limb threatening ischemia are far better if patients were enrolled in a local graft surveillance protocol.

Recent Publications

1. Davies A H, Hawdon A J, Sydes M R and Thompson A G (2005) Is Duplex surveillance of value after leg vein bypass grafting? *Circulation* 112:1985-1991.
2. Hawdon A J, et al. (2003) Vein graft surveillance: is the yield worth the effort? *Acta Chir Belg* 103:379-382.
3. Baril D T and Marone L K (2012) Duplex evaluation following femoropopliteal angioplasty and stenting: criteria and utility of surveillance. *Vascular and Endovascular Surgery* 46:353-357.
4. Bui T D, Mills J L Sr, et al. (2012) The natural history of duplex detected stenosis after femoropopliteal endovascular therapy suggests questionable clinical utility of routine duplex surveillance. *Journal of Vascular Surgery* 55:346-352.
5. Abu Dhabri A M, Mohammed K, et al. (2017) Systemic review and meta-analysis of duplex ultrasound surveillance for infrainguinal vein bypass grafts. *Journal of Vascular Surgery* 66:1885-1891.



Biography

Sanjay Singh has his expertise and passion in Vascular and Endovascular Surgery. He has done complex aortic endovascular fellowship and is a Vascular Consultant working in United Kingdom. His open and contextual surgical techniques are based on researched and practiced models which helped to create new pathways for innovation. He has achieved this aptitude after years of experience in research and teaching in university hospitals and institutions. The ever-responsive and adapting field of Endovascular Surgery has improved the survival rates of high risk patients

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