

Physician - Coronary Artery Diseases and Surgery

[MSB-62]

Comparison of Left Internal Mammary Artery to the Left Anterior Descending Artery Graft Patency

Orhun Abdulgani Yenigün, Miri Mirizada, Savaş Çidem, Uğur Dikkaş, Çiğdem Tel Üstünişik, Berk Arapi, Ozan Onur Balkanay, Deniz Göksedef, Suat Nail Ömeroğlu, Gökhan İpek

Department of Cardiovascular Surgery, İstanbul University of Cerrahpaşa-Cerrahpaşa Faculty of Medicine, İstanbul, Türkiye

Cardiovascular Surgery and Interventions 2024;11(Suppl 1):MSB-62

Doi: 10.5606/e-cvsi.2024.msb-62

E-mail: orhunyenigun@gmail.com

Received: September 13, 2024 - Accepted: September 29, 2024

Objective: This study aimed to compare the efficacy of the bidirectional palpation test and the results of transit time flow meter (TTFM) measurements by examining graft patency through early-period coronary computed tomography angiography.

Methods: The study was designed as a retrospective-prospective hybrid cohort study. Graft patency in the left internal mammary artery (LIMA) to left anterior descending artery anastomosis of 73 patients was evaluated. The results of the bidirectional palpation test and TTFM measurements performed during coronary artery bypass grafting were compared with contrast-enhanced coronary computed tomography angiography performed in the early postoperative period.

Results: Graft patency was statistically significantly higher in patients with a positive bidirectional palpation test compared to those with a negative test ($p<0.001$). Similarly, graft patency was significantly higher in patients with a mean flow of 10 mL/min or more compared to those with a mean flow below 10 mL/min ($p=0.001$).

Conclusion: A significant positive correlation was revealed between the bidirectional palpation test and the mean flow measured by TTFM. Additionally, both the bidirectional palpation test and TTFM accurately demonstrated the intraoperative LIMA graft patency. These findings indicate that both tests can be reliably used in the assessment of the LIMA to left anterior descending artery anastomosis.

Keywords: #CABG #coronary artery bypass grafting #LIMA to left anterior descending artery anastomosis #transit time flow meter #coronary computed tomography angiography #graft patency.

References

1. Sousa-Uva M, Neumann FJ, Ahlsson A, Alfonso F, Banning AP, Benedetto U, et al. 2018 ESC/EACTS Guidelines on myocardial revascularization. *Eur J Cardiothorac Surg* 2019;55:4-90. doi: 10.1093/ejcts/ezy289.
2. Sabik JF 3rd, Blackstone EH, Gillinov AM, Banbury MK, Smedira NG, Lytle BW. Influence of patient characteristics and arterial grafts on freedom from coronary reoperation. *J Thorac Cardiovasc Surg* 2006;131:90-8. doi: 10.1016/j.jtcvs.2005.05.024.
3. Lehnert P, Møller CH, Damgaard S, Gerdts TA, Steinbrüchel DA. Transit-time flow measurement as a predictor of coronary bypass graft failure at one year angiographic follow-up. *J Card Surg* 2015;30:47-52. doi: 10.1111/jocs.12471.