Int J Clin Exp Med 2014;7(4):1188-1189
www.ijcem.com /ISSN:1940-5901/IJCEM1402015

*Letter to Editor*

# Sequential left internal mammary artery usage for complex left anterior descending coronary artery revascularization

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Received February 4, 2014; Accepted March 31, 2014; Epub April 15, 2014; Published April 30, 2014

We read with great interest the article by Gucu et al. that is in concern with surgical treatment of the multiple complex stenoses in left anterior descending coronary artery [1]. We congratulate the authors for their good results in such a challenging problem. The primary aim of every cardiac surgeon in concern with coronary artery bypass grafting is complete revascularization with proven good long term results [2, 3]. However, due to the extent and complexity of severe arteriosclerosis standard coronary bypass techniques do not always allowthe surgeon to apply complete myocardial revascularization. In such conditions alternative revascularization techniques may be needed for complete revascularization especially if the diseased vessel is the LAD. Revascularization of the septal branches as well as the apical part of the left ventricular myocardium is important because of its direct relationship with early and late mortality, decreasing recurrent angina, and related deaths as the authors mentioned. To overcome such a problem several techniques have been proposed if there is an additional stenosis to the proximal LAD stenosis. Coronary endarterectomy and vein patch reconstruction have been proposed to revascularize the entire LAD system in the presence of diffuse disease [2, 4]. Another alternative approach for such situations is multiple jumping anastomoses (side to side anastomosis for the proximal partor parts of the LAD and end to side anastomosis for the distal part) which is reported with good long term results [2, 3, 5]. And in the text when we controlled the angiographic control **Figure 2A** it seems like the patient was suitable for such an approach with a proximal and a small mid LAD stenosis. By using this technique the authors would have been avoided from one more anastomoses besides the risk of atherosclerosis of a vein graft in the long term. Another question in mind is the choice of saphenous vein graft for bridging the stenosis. We think that in such conditions the choice should be radial or right internal thoracic artery which could be used as the bridging graft or an extension for sequential (jumping) grafting to the distal part of the LAD. But in the lack of an arterial graft except LIMA or insufficient length of the LIMA the technique described by the authors would be an alternative.

In conclusion complex stenosis of LAD is a challenging problem for every cardiac surgeon the technique described by the authors seems to be a useful method for overcoming such a hard situation and may be used in some cohort of patients undergoing coronary artery bypass grafting to achieve complete revascularization.

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## References

[1] Gucu A, Goncu T, Yavuz S, Ozluk OA, Eris C, Turk T, Ozyazıcıoglu A and Vural H. Alternative option in patients with multisegmental left anterior descending coronary artery disease for providing complete myocardial revascularization. Int J Clin Exp Med 2014; 7: 142-147.

[2] Alamanni F, Parolari A, Agrifoglio M, Valerio N, Zanobini N, Repossini A, Arena V, Sala A, Antona C and Biglioli P. Myocardial revascularization procedures on multisegment diseased left anterior descending artery: Endarterectomy or multiple sequential anastomoses (jumping)? Minerva Cardioangiol 1996; 44: 471-7.

[3] Nezic D, Knezevic A, Milojevic P, Jovic M, Sagic D and Djukanovic B. Tandem pedicled internal thoracic artery conduit for sequential grafting of multiple left anterior descending coronary artery lesions. Tex Heart Inst J 2006; 33: 469-72.

[4] Santini F, Casali G, Lusini M, D'Onofrio A, Barbieri E, Rigatelli G, Franco G and Mazzucco A. Mid-term results after extensive vein patch reconstruction and internal mammary artery grafting of the diffusely diseased left anterior descending coronary artery. Eur J Cardiothorac Surg 2002; 21: 1020-5.

[5] Mert M, Cetin G, Yildiz CE, Ugurlucan M, Caglar IM, Ozkara A, Akcevin A and Bakay C. Long term followup results of sequential left internal thoracic artery grafts on severe left anterior descending artery disease. J Cardiothorac Surg 2010; 5: 87.