

Endovascular Approach in Chronic Aortoiliac Disease in Patient Undergoing Coronary Artery Bypass Surgery

Abstract

Internal thoracic artery (ITA) is an excellent conduit for coronary artery bypass surgery (CABG). We present a patient with known preoperative aortoiliac disease with anterior collateral pathway who had an indication for elective coronary bypass. The use of ITA in these patients may cause lower limb ischemia. Detecting Winslow's anastomotic pathway before CABG is of utmost importance.

Keywords: *Aortoiliac disease, collateral blood flow' ischemia, coronary artery bypass surgery*

A 70-year-old male with a recent diagnosis of aortoiliac disease was referred to our department for elective coronary artery bypass surgery (CABG). His computed tomography angiography (CTA) revealed proximal left common iliac artery and proximal right external iliac artery obstruction. In addition, the following collateral pathways were demonstrated: From right subclavian and internal thoracic arteries to right external iliac artery through epigastric arteries and also a greater one at the left side between left internal thoracic artery, which was exceptionally large vessel to left external iliac artery through epigastric arteries, providing total perfusion of the left lower extremity [Figure 1]. Interruption of this collateral flow would cause severe leg ischemia. Endovascular treatment of aortoiliac disease was the first intervention that was decided. Percutaneous endovascular procedure (percutaneous transluminal angioplasty stent) was successfully performed in the left common iliac artery but failed in the right. A month later, a repeated CTA evaluation revealed left iliac artery-femoral axis patency and decreased appearance of left-sided anterior collateral pathway [Figure 2]. Then, he underwent CABG procedure with the use of left internal thoracic artery (ITA) as a conduit to the left anterior descending artery. He had an uneventful postoperative period. He was scheduled for open vascular surgery for the right external iliac artery obstruction.

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ITA is an excellent conduit for coronary artery bypass.^[1] In chronic aortoiliac disease, the development of anastomotic pathways, such as Winslow's collateral, may provide perfusion to the lower extremities. If this is not diagnosed, the use of ITA as a bypass graft may cause lower limb ischemia.^[2] Incidence of Winslow's pathway is not well documented. Based on angiographic reports, Winslow's flow is common in cases with severe arterial obstruction (stenosis of >75%).^[3] A more



Figure 1: Collateral pathways

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**Fotini Ampatzidou,
Charilaos-
Panagiotis
Koutsogiannidis,
Aggelos
Megalopoulos¹,
George
Trelopoulos¹,
George Drossos**

*Departments of Cardiothoracic
Surgery and ¹Vascular
Surgery, General Hospital
"G. Papanikolaou,"
Thessaloniki, Greece*

Address for correspondence:
Dr. Fotini Ampatzidou,
Department of Cardiothoracic
Surgery, General Hospital
"G. Papanikolaou,"
Exohi 57010,
Thessaloniki, Greece.
E-mail: fampatzidou@gmail.com

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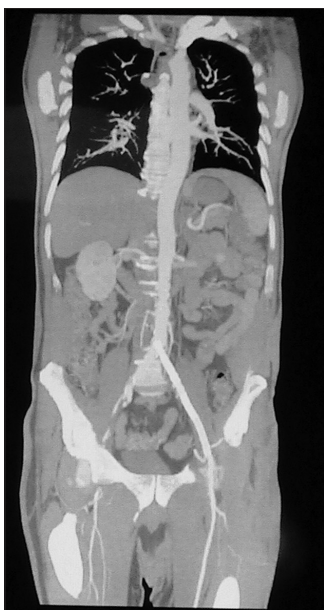


Figure 2: Left iliac artery-femoral axis patency

detailed imaging investigation could be suggested in severe cases of aortoiliac disease before the decision for ITA use.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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