

LETTER TO THE EDITORS

Is it possible to process to endomyocardial biopsy with right internal jugular occlusion without X-ray?

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Dear Sirs,

We describe an alternative approach to process conventional biopsy when the classical approach is not feasible.

Endomyocardial biopsies are performed for routine surveillance after the heart transplantation, and they remain the gold standard for diagnosis of acute cardiac allograft rejection [1–3]. But, they are also performed for the evaluation and diagnosis of cardiomyopathy, arrhythmia and secondary cardiac involvement by systemic diseases and neoplasms [4–8].

The standard approach was done through right internal jugular access (Fig. 1) because of rigid curvature of the biopptome (Fig. 1) that did not allow the alternative contralateral left internal jugular access with fluoroscopic guide or echocardiography guide [1,9]. Routine monitoring (3-lead ECG, non-invasive blood pressure monitoring, oxygen saturation measurement) was placed before the intervention. The head of the patient was placed on a flat cushion and soft rotated to facilitate puncture. The table was positioned head low to increase central venous filling. The patient was washed and draped sterile in Seldinger’s technique, and a 9

French silicone-locked catheter introducer sheath was inserted. The biopptome was introduced through the silicone lock. The biopptome was introduced and directed to the right atrium, rotated to the left lateral side of the patient, directed through the tricuspid valve to the right ventricular septum.

Between January 2008 and December 2010, we have performed 74 heart transplants.

A total of 90.5% (67 pts.) was monitored for rejection by endomyocardial biopsy with echocardiography guide (978). We utilized a classic 8–9 Fr 50 cm (Fig. 1) biopptome into the right ventricle through the right internal jugular vein (Fig. 1). Among 0.9% of transplants, our population of the study (6/67 pts, three males and three females, mean age 57.5 ± 6) presented with a right internal jugular vein thrombosis, so we utilized a classic 8–9 Fr 50 cm biopptome into the right ventricle, but through the left subclavian vein (Fig. 1).

This method allowed us to proceed easily in 81 procedures, at the same time and in the same operative sessions. Although the classical right jugular vein access was

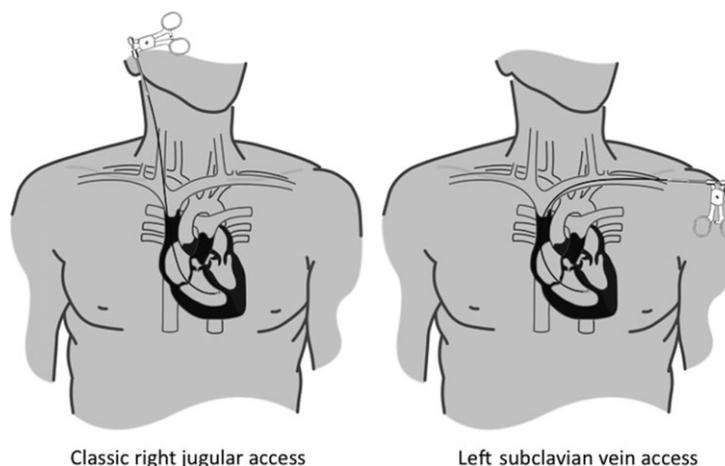


Figure 1 Classic right jugular access and left subclavian vein access scheme.

previously planned, we proceeded with left subclavian access without resorting to further postponement of meetings and without proceeding with the femoral access in haemodynamics in a second operative session. We had no complications in any procedures (81).

The method allows us to proceed with the routine biopsy when the classical approach of internal jugular vein is not possible because of some complications, with minimal discomfort to patients. In fluoroscopic procedure, the access is taken through the right ventricle via femoral veins and there is an irradiation risk for both the patient and the medical team [10].

Instead, the left subclavian procedure with echocardiography is achievable without discomfort for patient, without X-ray radiation and without the necessity of haemodynamic operative theatre; so, we believe that this method represents an important alternative to the impediment of conventional biopsy technique that would require haemodynamics fluoroscopic procedure in another operative sitting and in different appointment. It exploits the physiological anatomy of the subclavian vein and the physical characteristics of the biptome (it is semi-rigid and not very flexible), so it is easy to access at the classical biopsy harvest points in the right ventricular septum.

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Conflicts of interest

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