

Transradial left ventricular endomyocardial biopsy feasibility, safety and clinical usefulness: Initial experience of a tertiary university center

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Abstract

Introduction and objectives

Over the last decade, several studies have suggested that left ventricular endomyocardial biopsy is safer and has a higher diagnostic yield than transvenous right ventricular biopsy. In addition, recent publications indicate that the transradial approach is a feasible and safe alternative to the transfemoral approach for sampling the left ventricle. We report our initial experience with transradial endomyocardial biopsy with regards to feasibility, safety and usefulness.

Methods

Single-center registry of consecutive patients undergoing intended transradial left endomyocardial biopsy. Clinical and technical data were collected prospectively, with a particular focus on success rate and complications.

Results

Twenty-seven patients were screened for left ventricle biopsy. Twenty (25) were selected for an intended transradial approach (mean age 51 ± 18 years old, 22 male). Success rate was 100% with no crossover to femoral approach. There were no major complications. Two patients experienced mild radial spasm. One of them also had a run of non-sustained ventricular tachycardia.

Indication for biopsy was either myocarditis or cardiomyopathy of unknown etiology. The final diagnosis was acute lymphocytic myocarditis in five patients, chronic myocarditis in one patient, amyloid light-chain amyloidosis in four patients and transthyretin amyloidosis in six patients. Myocarditis was ruled out in eight patients and amyloidosis in one patient.

Conclusions

Transradial left ventricle endomyocardial biopsy is a very safe and feasible method of sampling the myocardium for histopathological analysis, with a good diagnostic yield and clinically meaningful results in properly selected patients.

Keywords: Left endomyocardial biopsy, Transradial, Myocarditis, Cardiomyopathy