

Percutaneous Transcatheter Closure of Post-Infarct Left Ventricular Pseudoaneurysm; A Case Report and Review Of Literature

Abstract

Introduction: Left ventricular pseudoaneurysm (LVPA) is a well-known complication of myocardial infarction and open-heart surgery and has recently been described as succeeding transapical transcatheter aortic valve replacement (TAVR). While surgical intervention is the conventional therapeutic approach, transcatheter closure can be considered in patients at high risk to surgical procedures.

Methods: In this article we present a post-myocardial infarction left ventricular pseudoaneurysm for which closure was done via retrograde left ventricular (LV) access using an Amplatzer Septal Occluder which measured at 6mm. We also provide a review of recent literature focusing on indications and outcomes of the different techniques and devices.

Results: The procedure was successful, and the patient was discharged home on the second post-operative day. Two months later, the patient continued to feel very well with no heart failure symptoms and continued to enjoy daily walking with no limitations. Currently there is no recommendation to a specific device to ensure closure and in the literature, the choice of the device depended on the device availability the size of the defect, and lastly the physicians' preference clinical judgement. The most commonly used device was the ventricular septal defect muscular occlude (MVSDO). The vascular plug (VP), and the septal occlude were used to a lesser extent.

Conclusion: Traditionally, surgical repair has been the preferred or only available option. Recently, transcatheter closure of LVPA has emerged as a feasible and safe alternative to surgical repair. In skilled hands, this can be accomplished with good success but lesser risks than surgical repair. Therefore, we propose that whenever the anatomy permits, transcatheter closure of LVPA should be the preferred initial approach.