

PERCUTANEOUS INTERVENTIONAL TREATMENT OF TRICUSPID BIOPROSTHETIC DYSFUNCTION: 5 YEAR EXPERIENCE AT THE NATIONAL INSTITUTE OF CARDIOLOGY "IGNACIO CHAVEZ" IN MEXICO CITY, MEXICO

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BACKGROUND

Rheumatic tricuspid valve disease is not a rare pathology in Mexico. Bioprosthetic tricuspid valve dysfunction (BTVD) has become more prevalent over the last years. Most of the times clinical findings are evident only after right heart failure is severe and hepatic failure starts to develop. Given their comorbidities, most of these patients are turned down for redo tricuspid valve replacement. Structural interventional Cardiology has become a feasible and safe alternative for these patients. Implantation of a percutaneous valve is possible when a prosthetic ring is present, despite the right ventricle's complex and irregular morphology. Structural intervention in Mexico is growing at an accelerated rate; nevertheless; there is not a single registry of percutaneous tricuspid valve interventions. Despite its rarity among cardiovascular diseases, our National Institute of Cardiology is a reference center for tricuspid bioprosthetic dysfunction.

OBJECTIVE

We described the clinical features and 5 year experience of percutaneous interventional treatment of bioprosthetic tricuspid valve dysfunction in the National Institute of Cardiology "Ignacio Chavez" in Mexico City, Mexico.

METHODS

This was an observational, retrospective study which included patients with bioprosthetic tricuspid valve dysfunction submitted to percutaneous intervention for clinical relief of their disease between the years 2011 and 2016.

RESULTS

Between 2011 and 2016 a total of 87 patients were found to have BTVD. Of these, only 13 were eligible for percutaneous treatment with tricuspid valvuloplasty with a 2 balloon technique. In all of them stenotic dysfunction was the predominant feature. The mean time until BTVD after surgery was 11.4 +/- 4 years. 92% of the valves were bioprosthetic valves manufactured in our institution (INCTM). Clinical features included 76% of patients in NYHA class III or IV, with ascites and hepatomegaly being described in up to 40% of patients. Prevalence of renal failure was not significant. Prevalence of right heart failure by echocardiogram was as high as 50%. Mean gradient of BTVD was of 11.7 +/- 4.9 mmHg. Procedural success was defined as a decrease in the transtricuspid gradient >50%. This was achieved in 80% of all cases. The procedure failed in 3 cases as we did not achieve the required reduction of gradient. Of note, 38% of all patients developed significant tricuspid regurgitation.

CONCLUSION

Percutaneous tricuspid valvuloplasty showed to be safe and clinically relevant to relieve severe stenosis in BTVD in 13 cases of our single center experience. This study serves as a background for future structural interventional strategies including the beginning of a tricuspid transcatheter valve implantation program in selected patients.