

Clinical features, management and outcome of Infective Endocarditis after Transcatheter Pulmonary Valve Implantation

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INTRODUCTION

Transcatheter pulmonary valve implantation (TPVI) is a valuable treatment option for patients with dysfunctional right ventricle outflow tract (RVOT).

Infective Endocarditis (IE) has been reported as an important complication of this procedure with potential lethal consequences. We aimed to review the clinical, features, management and outcomes of IE after TPVI in a tertiary hospital centre.

METHODS AND RESULTS

Retrospective review of the clinical records, and imaging, of the patients diagnosed with IE after TPVI (Melody/Edwards Sapien) in our Congenital Heart disease Unit between 2012 and 2018.

RESULTS

From February 2012 to November 2018, 46 patients (24 males- 52%) underwent TPVI (33 Melody, 13 Edwards). 6 patients (13%) had been diagnosed with 7 IE episodes. One of the patients, with Down Syndrome and chronic dermatitis had a second episode of IE 2,5 years after the first episode was resolved. IE diagnosis was based on clinical symptoms, positive blood cultures in 6 episodes, with one episode with 2 different species found: Staphylococcus Aureus MS (N=3), Streptococcus Sanguis (N=1), Streptococcus Anginosus (N=1), Streptococcus Coagulasa Negative (N=1) and Streptococcus Parasanguinis (N=1). Positive signaling of the TPVI in the PET/CT was found in 2/7 when echocardiogram was not conclusive. Echocardiography showed vegetations in 2/7 IE episodes, but in all an increase in the Doppler gradient across the valve and stent. All patients received intravenous antibiotic treatment according to the antibiogram for at least 6 weeks except one patient who received 8weeks antibiotics therapy. None required surgical explantation or percutaneous reintervention on the valve. 5 patients were discharged with a mildly dysfunctional valve (mild regurgitation and stenosis), and with normal valve function in 2 patients (no regurgitation and peak gradient <30mmHg). As predisposing conditions for IE, dental procedure weeks after IE (n=1), Chronic dermatitis (n=2) and 2 previous IE in the conduit before the TPVI (n=1). All had been on regular aspirine treatment after the TPVI. There were no deaths.

CONCLUSIONS

In our serie, all IE were cured with antibiotic treatment, leaving mildly dysfunctional valves. None of the patients required surgical/percutaneous interventions, either in the acute episode nor in a mid term follow up.