

Outcome of the First Percutaneous Tricuspid Valve Interventions Performed in Malta

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Background

Torrential tricuspid regurgitation (TR) is a complex condition associated with significant morbidity and mortality. Medical treatment is often restricted to heart failure medication. Surgical repair is frequently contraindicated due to patient frailty. TricValve[®] Transcatheter Bicaval Valves System is a recent innovation in the management of symptomatic tricuspid insufficiency which can be offered to patients unfit for surgical therapy. TricValve[®] is a system of two self-expanding biological valves which are implanted percutaneously into the superior and inferior vena cava without disturbing the native tricuspid valve (TV). TricValve[®] intervention was introduced in Malta in September 2021.

Purpose

To study the safety and outcome up to 1 month of the first ever percutaneous TV interventions using the TricValve[®] system for torrential TR in our centre.

Methods

The data of the patients who underwent percutaneous TV intervention in September 2021 was collected using the hospital IT patient records, namely ICM, CVIS and ECS. Virtual consultation was performed at one month post intervention.

Results

Two male patients, aged 71 and 82 years old, suffering from right heart failure secondary to torrential tricuspid regurgitation underwent the percutaneous TV intervention on 1st September 2021. Both patients had the important co-morbidities of hypertension, dyslipidaemia, coronary artery disease, and atrial fibrillation. The bi-caval heterotopic bioprosthetic valves were deployed under general anaesthesia using transoesophageal echocardiographic guidance. There were no complications during the procedure. During the immediate post intervention phase, both patients complained of pain in the right scapular region which resolved with analgesia. Both were haemodynamically stable. The following morning the transthoracic echocardiogram showed both valves in situ with no paravalvular leak and no pericardial effusion. Both were well and discharged home. At 1 month both reported an improvement in dyspnoea and exercise tolerance.

Conclusion

This is the first report of the first ever percutaneous tricuspid valve interventions in Malta. Two patients underwent the procedure for torrential TR using the TricValve[®] Transcatheter Bicaval Valves System. Both had no immediate serious complications and important clinical improvement at 1 month. Although small in size, this study is important because our centre is amongst the first in the world to perform these procedures.