

中文題目：經導管主動脈瓣膜植入後之加速性心室心律

英文題目：Accelerated idiopathic ventricular rhythm in patient post transcatheter aortic valve implantation

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Introduction: Transcatheter aortic valve implantation (TAVI) is an established treatment option for patients with severe aortic stenosis who had a high risk for undergoing surgical aortic valve replacement (SAVR). Although improvement of symptoms and survival rate in patients with successful TAVI, new electrical conduction abnormality and arrhythmias could be developed after TAVI.¹ Among these arrhythmias after TAVI, accelerated idiopathic ventricular rhythm (AIVR) is not often reported.

Case report: An eighty-one-years old man suffered from chest tightness and dyspnea for two months. Electrocardiography (ECG) showed sinus rhythm without bundle branch block. Echocardiography revealed a severe aortic stenosis with preserved left ventricle systolic function. Cardiac catheterization study disclosed non-significant coronary artery disease and estimated aortic valve area was 0.39 cm². He received successfully TAVI with 29 mm CoreValve Evolut R (Medtronic) via transfemoral approach. Mild paravalvular leak and no more transaortic valve pressure gradient were found after valve implantation. He was transferred to intensive care unit (ICU) for further care. An wide QRS rhythm occurred after 3 days of TAVI . The ECG of the wide QRS rhythm revealed that RR interval and PP interval were around 700 and 760 ms, respectively. After atropine 1 mg intravenously injection, sinus rhythm was transiently recovery. The AIVR was impressed. Besides, Holter scan after 4 days of TAVI disclosed sinus rhythm with first degree AV block and LBBB and intermittent AV dissociation with AIVR. After one month of TAVI, sinus rhythm without LBBB was demonstrated at the 12 lead ECG.

Discussion: Ventricular tachycardia (VT) originated from aorto-mitral continuity after few days of TAVI have been reported.^{2,3} Alternation of autonomic nerve function by TAVI may be one of mechanisms of AIVR in this patient. In conclusion, TAVI could not only induced transient conduction abnormality but also ventricular

arrhythmia, including AIVR.

References:

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3. Left-ventricular outflow tract ventricular-tachycardia event following CoreValve transcatheter aortic-valve implantation. *Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions*. 2012;79:331-3.