

中文題目:金屬主動脈瓣膜之心內膜炎併發瓣膜周圍漏、環狀膿腫和假性動脈瘤

英文題目: Infective Endocarditis of Prosthetic Aortic Valve Complicated with Ring Abscess, Paravalvular Leakage and Pseudoaneurysm

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A 77-year-old man was admitted with fever and chills for 5 days. He had history of severe aortic stenosis and received mechanical valve replacement 10 years before the admission. One episode of unknown fever with persistent Oxacillin-resistant *Staphylococcus epidermidis* (ORSE) bacteremia was noted during the previous hospitalization 3 months ago. Probable infective endocarditis was diagnosed based on blood cultures, positive rheumatoid factor, fever, and positive predisposing factor without definite findings by transesophageal echocardiography. The combination of intravenous vancomycin and gentamycin had been given for 5 days and vancomycin had been continually used for 4 weeks and discharged uneventfully. On admission, the peripheral blood count revealed a leukocytosis with left shifting. The chest x-ray was clear and urine analysis was negative for leukocytosis. Persistent bacteremia with Oxacillin-resistant Coagulase-negative *Staphylococcus* spp was early identified. Transthoracic echocardiography suspected a fluttering echo on mechanical aortic valve and a mild regurgitation flow. Transesophageal echocardiography disclosed a fluttering vegetation on aortic valve, a crescent echo-free space around the aortic ring (Figure 1A) and moderate severity of perivalvular regurgitation flow. (Figure 1B) Before operation, reconstruction of dual-source dual-energy computed tomography (Siemens Medical Solutions) demonstrated partial loose sutures of mechanical aortic valve, multifocal pseudoaneurysm formation and periaortic abscess formation. (Figure 2A-2B) Post processing was done by one Radiologist who was skilled in computed tomography angiography. Two datasets (140 kV and 80 kV) were transferred simultaneously into the dual-energy software for automatic dual energy bone removal, then acquired maximum intensity projection image of coronary vessels and aortic valve apparatus. (Figure 2C-2D) After 10-day course of intravenous vancomycin and gentamycin, he received open heart surgery for prosthetic valve removal, abscess debridement, pseudoaneurysm repairment, and valve replacement. He was uneventful after the operation.

Figure 1 Transesophageal echocardiography showed a crescent echo-free space around the aortic ring (Figure 1A) and moderate severity of perivalvular regurgitation flow.

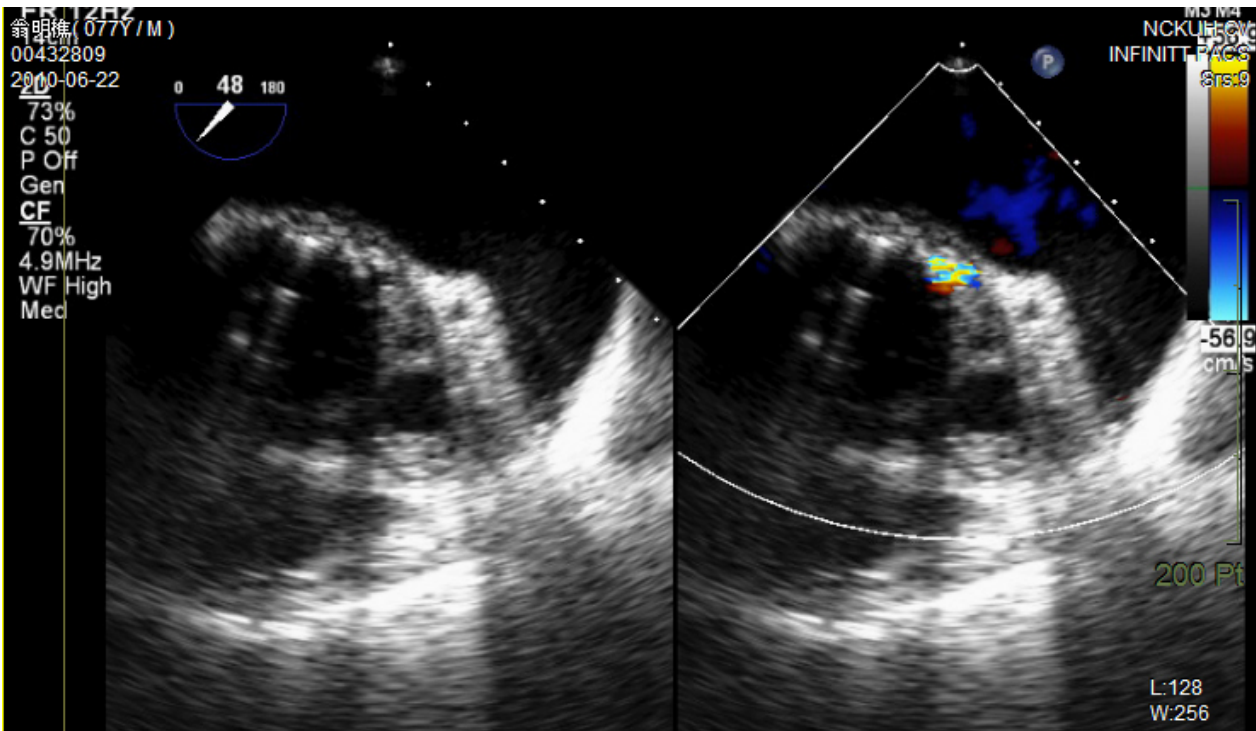


Figure 2. Dual-source dual-energy computed tomography demonstrated partial loose sutures of mechanical aortic valve, multifocal pseudoaneurysm formation and periaortic abscess formation.



Figure 3. 3D reconstruction and post-processing of the computed tomography showed clearly the anatomy of the mechanical aortic valve, ring abscess, and pseudoaneurym.

