

CASE IMAGE

Aortic graft distortion

Aort greft distorsiyonu

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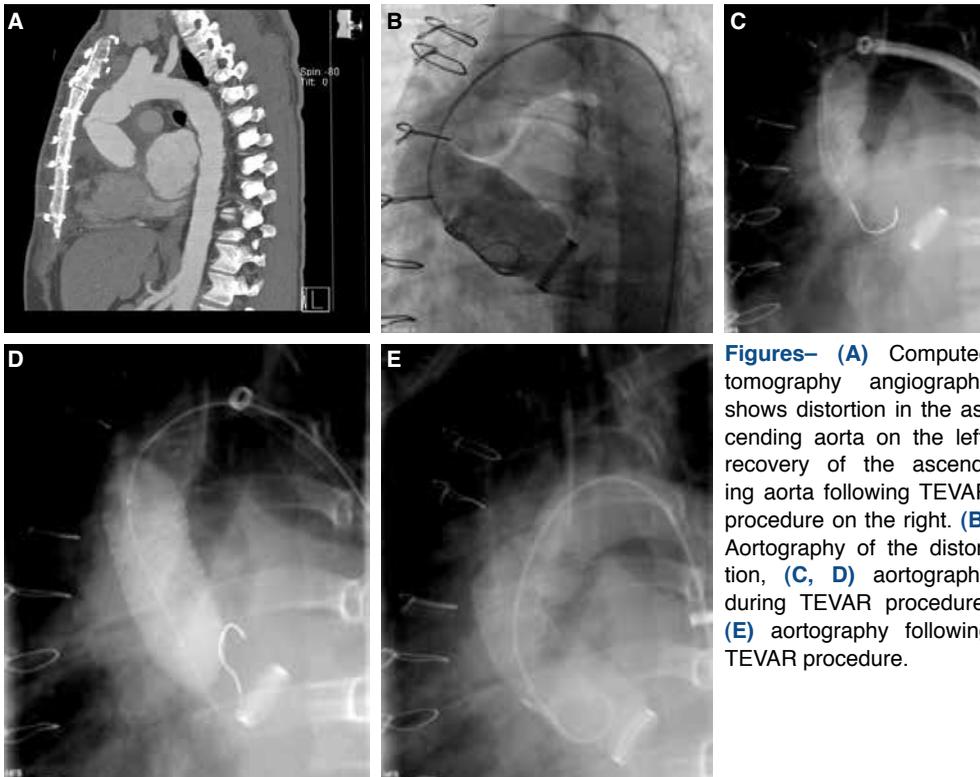
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Ascending aorta surgery has long been performed to prevent mortality and morbidity in cases of aortic dissection. Various surgical procedures have been established, including composite valve and graft implantation, such as the Bentall, Cabrol, and “button” techniques, graft implantation alone, such as the David procedure, and aortic remodeling techniques. Presently described is the case of a 34-year-old man who had undergone aortic valve surgery (in which a 25-mm valve had been used), supra-coronary ascending aortic replacement (in which a no. 30 tube graft had been used), and right coronary artery-saphenous vein graft bypass, all 3 months prior. The patient presented to the emergency department with complaints of dyspnea and diffuse peripheral edema, which had progressed for the past 2 weeks. The patient

was tachypneic, and physical examination revealed +4 bilateral pretibial edema. In blood sample analysis, B-type natriuretic peptide (BNP) was 6200 pg/ml (normal: <100 pg/ml). Transthoracic echocardiography (TTE) revealed left ventricular ejection fraction (LVEF) of 20% with global hypokinesia, and trans-aortic gradient increment (max: 62 mmHg) was present. Thoracoabdominal contrast-enhanced computed tomography and aortography were performed to specify increased gradient (Figures A–E), and aortic graft distortion was obtained. Coronary angiography demonstrated graft patency. Thus, ischemic heart failure was excluded, and LVEF decrease (60% to 20%) was thought to be secondary to un-rap effect on the left ventricle, as LVEF upon first discharge was normal. In consultation with surgery team, decision to perform urgent thoracic endovascular aortic repair (TEVAR) was made, due to severe heart failure and high reoperation risk (EuroSCORE II: 32.95%). During TEVAR, simultaneous aortography confirmed 6-cm distortion distal to the aortic valve. Aortic dimensions were 11.5-mm distortion level, 25-mm proximal, and 28-mm distal to the distortion level.



Figures– (A) Computed tomography angiography shows distortion in the ascending aorta on the left, recovery of the ascending aorta following TEVAR procedure on the right. (B) Aortography of the distortion, (C, D) aortography during TEVAR procedure, (E) aortography following TEVAR procedure.

A 25 x 50-mm thoracic stent graft was deployed. Indentation was detected in mid-stent region, and post-dilatation was administered with aortic balloon. In spite of post-dilatation, residual stenosis remained with maximum gradient of 14 mmHg. Consequently, TEVAR was completed without complication. A successful TEVAR with unique and illustrative figures of graft distortion is presently described. The patient was discharged with LVEF of 30% and maximum trans-aortic gradient of 14 mmHg.