

UNUSUAL AORTIC DISSECTION MIMICKING PENETRATING ATHEROSCLEROTIC ULCER AFTER BLUNT CHEST TRAUMA

JIN-SUN PARK, MD¹, SANG-HYUN LIM, MD² AND JOON-HAN SHIN, MD¹

¹DEPARTMENT OF CARDIOLOGY, ²DEPARTMENT OF THORACIC AND CARDIOVASCULAR SURGERY, AJOU UNIVERSITY SCHOOL OF MEDICINE, SUWON, KOREA

KEY WORDS: Aortic dissection · Transesophageal echocardiography · Chest blunt trauma.

A 73-year-old man was referred for multiple blunt trauma after an automobile accident with drowsy mentality. At the time of impact, he sat unstrained in the back seat behind the driver. To evaluate the organ damages, brain and chest computed tomography (CT) scans were performed. The chest CT with sagittal reconstruction showed 2 separate contrast-filled false lumens composed of ruptured intimal flaps in aortic arch and descending thoracic aorta. The lesions communicated directly with the aortic lumen. The proximal lesion in aortic arch, occurred just above the left subclavian artery, had 8 mm-depth ulceration into the aortic media and the distal lesion in descending aorta had 5mm-depth ulceration into the aortic media, mimicking penetrating atherosclerotic ulcer. Also, multiple atherosclerotic plaques were found in the whole thoracic aortic wall (Fig. 1). Transesophageal echocardiography (TEE) of the aorta showed similar findings with chest CT. The continuity of endothelium was completely disrupted and 2 separate false lumens were made due to endothelial detachment. The ruptured endothelium of proximal lesion was highly movable. During systole, it disturbed the aortic flow (Fig. 2A). The distal lesion didn't disturb the aortic flow (Fig. 2B).

Dissection of the aorta after blunt chest trauma usually occurs at the level of ligamentum arteriosum just distal to the left subclavian artery. However, in our case, the lesions occurred at unusual sites. We suggest that the decelerating force propagated through the aortic wall may cause underlying atherosclerotic plaques breakage forming endothelial detachment and rupture at unusual sites.



Fig. 1. The chest CT with sagittal reconstruction. The proximal dissection (*). The distal dissection (arrow).

• Received: July 28, 2009 • Revised: August 18, 2009 • Accepted: August 21, 2009

• Address for Correspondence: Joon-Han Shin, Department of Cardiology, Ajou University School of Medicine, San 5 Woncheon-dong, Yeongtong-gu, Suwon 443-721, Korea Tel: +82-31-219-5712, Fax: +82-31-219-5708, E-mail: shinjh@ajou.ac.kr

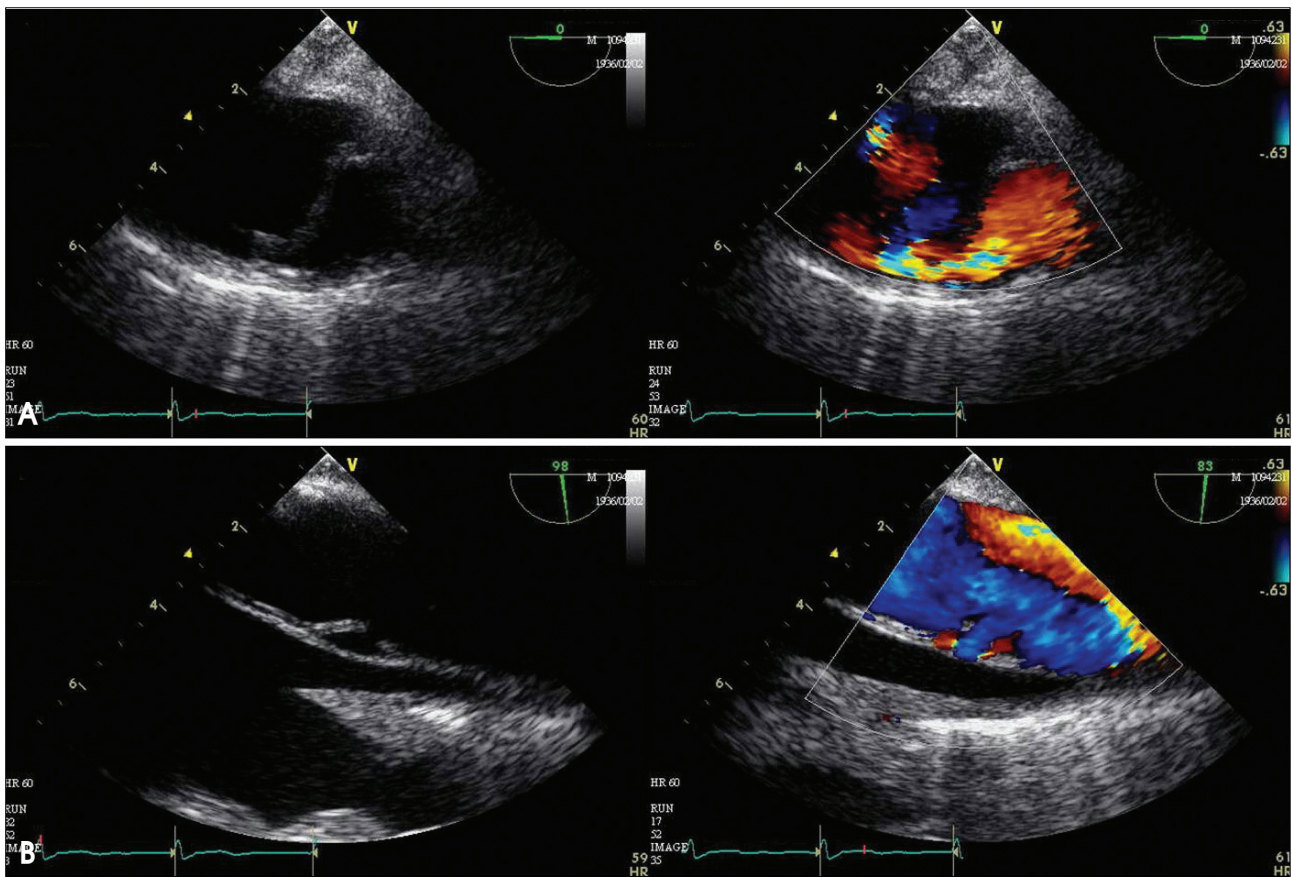


Fig. 2. Transesophageal echocardiography, color Doppler. Proximal dissection (A), distal dissection (B).