

Chronic traumatic pseudoaneurysm of the ascending aorta

Przewlekły pourazowy tętniak rzekomy aorty wstępującej

Leili Pourafkari^{1,2}, Samad Ghaffari¹, Babak Nasiri¹, Mehrnoush Toufan¹, Nader Djalal Nader²

¹Cardiovascular Research Centre, Tabriz University of Medical Sciences, Tabriz, Iran

²Anesthesiology Department, University at Buffalo, United States

A 52-year-old, otherwise healthy female patient presented to our clinic with high blood pressure. She reported a history of a car accident two years earlier in which she was hit by a bus while crossing the road and had sustained blunt head and chest injury and fractures of multiple bones. She did not report any chest pain, dyspnoea, or cough. Her blood pressure had been noticed to be high on several occasions. Transthoracic echocardiography showed normal chamber sizes and mild aortic regurgitation of a tri-leaflet aortic valve (AV). Her ascending aorta was also dilated up to 3.7 cm, and the aortic contour 2 cm distal to AV seemed distorted. In view of the patient's history, computed tomography angiography was performed, which showed ascending aortic pseudoaneurysm of 5.1 cm (Fig. 1). Transoesophageal echocardiography revealed a saccular dilation of the ascending aorta 2 cm from the AV with a narrow neck compatible with pseudoaneurysm (Fig. 2). She underwent resection of pseudoaneurysm and repair with Dacron graft (Fig. 3). Pathological examination showed cystic degeneration in the media layer with disarray and fragmentation of collagen fibres (Fig. 4). The aortic isthmus is the most common injury site in traumatic aortic transections. Few patients develop chronic pseudoaneurysm, which occurs in the isthmus region in more than 90% of cases. Chronic traumatic pseudoaneurysms involving ascending aorta are exceedingly rare. In the presented case cystic medial degeneration could have contributed to the susceptibility of the aortic wall to rupture.

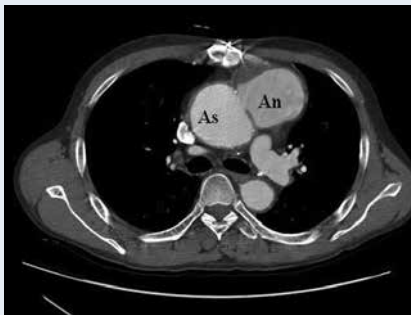


Figure 1. Computed tomography angiogram showing the pseudoaneurysm of the ascending aorta; As — ascending aorta; An — aneurysm



Figure 2. Transoesophageal view showing the aneurysmal opening and aneurysm sac; AAO — ascending aorta



Figure 3. Surgical view of the pseudoaneurysm; PA — pulmonary artery; RAA — right atrial appendage; LCC — left coronary cusp; RCC — right coronary cusp; NCC — non coronary cusp; SVC — superior vena cava

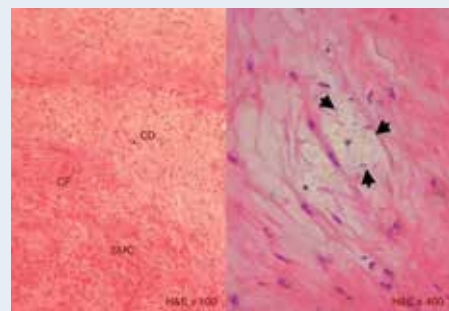


Figure 4. Pathological examination of the ascending aortic tissue showing accumulation of basophilic mucinous ground substance in the media with cyst-like lesions associated with disarray and fragmentation of collagen fibres; CD — cystic degeneration; CF — collagen fibres; SMC — smooth muscle cells; arrow — area of cystic degeneration

Address for correspondence:

Nader Djalal Nader, MD, PhD, FACC, Anaesthesiology Department, University at Buffalo, 252 Farber Hall, Buffalo, NY 14214, United States, e-mail: nadernd@gmail.com

Conflict of interest: none declared

Kardiologia Polska Copyright © Polskie Towarzystwo Kardiologiczne 2016