Tzu Chi Medical Journal 25 (2013) 122–123

Contents lists available at SciVerse ScienceDirect

Tzu Chi Medical Journal

journal homepage: www.tzuchimedjnl.com

Pathology Page

Aortic dissection

Yung-Hsiang Hsu*

Department of Pathology, Buddhist Tzu Chi General Hospital and Tzu Chi University, Hualien, Taiwan

ARTICLE INFO

Article history:
Received 6 August 2012
Received in revised form
17 August 2012
Accepted 20 August 2012

A 43 year-old man was found comatose in his car, which was parked at the roadside. He was brought to our emergency department. Bedside echocardiography revealed a pericardial effusion with right chamber compression and a flap over the abdominal aorta. With an impression of aortic dissection complicated by stroke and cardiac tamponade, an echo-guided pericardiocetesis was performed, and about 100 mL of fresh blood was aspirated initially. The patient then had pulseless electrical activity and died after cardiopulmonary resuscitation was performed for 30 minutes.

At autopsy, 300 mL of bloody pericardial effusion (cardiac tamponade; Fig. 1A) was obtained. The wall of the ascending aorta was dissected from the aortic root to the aortic arch, diagnostic of Stanford Type Aaortic dissection (Fig. 1B).

Aortic dissection most often affects the ascending aorta and major branches of the aorta. It may involve the ascending aorta (Type A), such as in our case, or the distal aorta, sparing the ascending aorta (Type B). Almost all patients have a history of hypertension. Over 95% of cases have a transverse tear in the intima and internal media, and it is widely believed that spontaneous laceration of the intima allows blood from the lumen to enter and dissect the media.

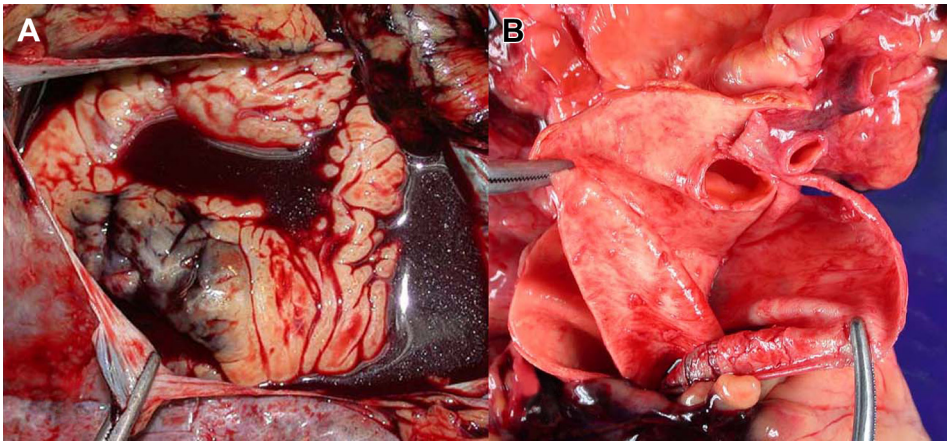

Fig. 1. (A) Bloody fluid occupies the pericardium. (B) The wall of the aorta is dissected from the aortic root to the aortic arch.

Since the outer wall of a false channel of a dissecting aorta is thin, hemorrhage into the extravascular space including the pericardium, pleural space, and retroperitoneum can frequently cause death.

* Corresponding author. Department of Pathology, Buddhist Tzu Chi General Hospital, 707, Section 3, Chung-Yang Road, Hualien, Taiwan. Tel.: +886 3 8565301×2190; fax: +886 3 8574265.
E-mail address: yhhsu@mail.tcu.edu.tw.

http://dx.doi.org/10.1016/j.tcmj.2012.08.005

Further reading

[1] Bode-Jänisch S, Schmidt A, Günther D, Stuhrmann M, Fieguth A. Aortic dissecting aneurysms–histopathological findings. Forensic Sci Int 2012;214:13–7.
[2] Pratt B, Curci J. Arterial elastic fiber structure. Function and potential roles in acute aortic dissection. J Cardiovasc Surg 2010;51:647–56.
[3] Malkawi AH, Hinchliffe RJ, Yates M, Holt PJ, Loftus IM, Thompson MM. Morphology of aortic arch pathology: implications for endovascular repair. J Endovasc Ther 2010;17:474–9.