When a snapped sternal wire stabbed the aorta

Kazuhito Imanaka*, Toshihisa Asakura, Hideaki Yamabi

Department of Cardiovascular Surgery, Saitama Medical Center, Saitama, Japan

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After reoperative aortic surgery in a Marfan patient, five sternal wires cut the sternum and one wire was snapped, resulting in sternal dehiscence (Fig. 1). Ten days later, the dehiscence got wider. The cut end of the snapped wire shifted toward the aorta and stabbed it (Fig. 2). Sternal dehiscence necessitated urgent surgical revision.

Fig. 1. This 44-year-old male, who had a history of aortic root replacement for acute aortic dissection 9 years ago, suffered impending rupture of dissecting aneurysm in the distal aortic arch. He underwent replacement of the aortic arch and stent graft implantation into the descending aorta. Two weeks later, the sternum was dehisced, but the cut end of the snapped wire was remote from the aorta. Surgical revision of the sternum was not performed because of his delayed convalescence.

Fig. 2. Ten days later, a subcutaneous hematoma appeared in front of the chest. Computed tomography revealed that the cut end of the snapped wire had shifted and injured the ascending aorta (vascular prosthesis). Note extravasation next to the wire (arrow). Because it was a delayed hemorrhage, considerable subcutaneous hematoma occurred but not much blood came out. The patient was taken to the operation theater for emergency hemostasis.