



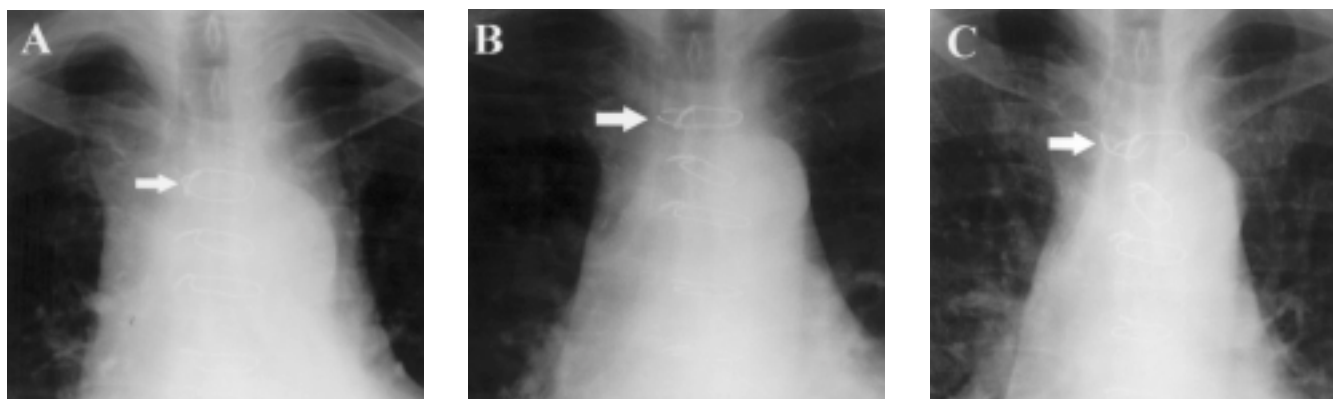
Fracture and Migration of a Sternal Metal Suture: A Possible Cause of Post-Coronary Bypass Intermittent Chest Pain

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Key words: coronary artery bypass grafting, sternal suture, chest pain

IMAJ 2005;7:52



[A] Chest X-ray shortly after coronary bypass surgery. The white arrow points to the first sternal metal suture. **[B]** Six months later, a fracture in the right aspect of the first sternal suture (white arrow) is noted. **[C]** Nine months after surgery an additional fracture of the first suture is observed (white arrow), with migration of this segment towards the skin.

A 68 year old man underwent successful and uneventful coronary artery bypass surgery due to stable angina pectoris and triple vessel coronary artery disease. As shown in Figure A, chest X-ray at discharge was normal. Six months later he complained of intermittent chest pain aggravated by cough and changes in body position. He denied effort-related angina, recent chest trauma, extreme upper body exercise or any recent respiratory disease. Physical examination revealed slight upper sternum tenderness with no signs of skin infection. Chest X-ray [Figure B] now shows a fracture in the right aspect of the first upper sternal metal suture, with slight distortion in the position of the second suture. Three months later the patient reported a protruding small but tender mass at the upper third of the sternum and increasing frequency of the chest pain

episodes. A third chest X-ray revealed an additional fracture of the first suture [Figure C]. At this time slight sternal instability was also noted. He was referred to a cardiac surgeon who extracted the first metal suture. The patient is asymptomatic after 6 months follow-up.

Chest discomfort early after coronary bypass surgery is common and is often related to the local skin incision or the site of chest tube insertion [1]. Late appearance of atypical chest discomfort after bypass surgery is usually related to non-cardiac causes [2]. Our case demonstrates that stainless-steel sternal sutures might break and provoke recurrent and intermittent chest pain. Although the incidence of sternal wire fractures is not well defined, it is a possible cause of post-CABG chest

CABG = coronary artery bypass surgery

pain that should be sought. Clinical assessment and chest X-ray focusing on the sternal sutures are essential for early diagnosis and successful treatment.

References

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