

Fallacious fracture of clavicle after cardiac surgery

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Artefacts are quite common in chest radiographs and may lead to unnecessary imaging and interventions, if not recognized timely. A 70 year old male with triple vessel coronary artery disease underwent coronary artery bypass grafting (CABG) at our institute. Preoperative history was unremarkable. Procedure was uneventful with three grafts. Post procedure, the patient was shifted to intensive care unit. On duty resident noticed fracture left clavicle on postoperative chest radiograph which was not present earlier (*Figure 1*). Palpation of the site did not reveal any gap or crepitus. On repeating the chest radiograph, clavicle was found to be intact with no discontinuity of margins (*Figure 2*). On comparison of the two radiographs, the earlier was found to be a rotated film with improper centring and lateral tilt, which fallaciously gave the impression of fractured clavicle.

Musculoskeletal complications of upper limb are not uncommon complications of CABG. Stiller et al reported that approximately 30 per cent of patients developed musculoskeletal complications that interfered with their level of comfort and function 8-10 weeks following cardiac surgery (1). Musculoskeletal and neurological dys-

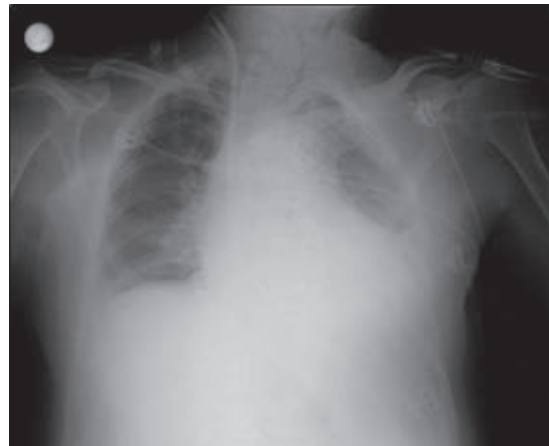


Figure 1
 Postoperative chest radiograph showing fracture of left clavicle.



Figure 2
 Postoperative chest radiograph showing normal left clavicle.

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function after CABG may be due to the mechanical demands like sternal retraction, dissection of the internal mammary artery, internal jugular venous cannulation, patient position and devascularisation of the sternum placed upon the patient during the surgical procedure (2, 3). Vander Salm et al have demonstrated that median sternotomy can cause first rib fractures (4).

In our case too we initially thought of sternal retraction related complication but careful evaluation and repeat chest radiograph ruled out the possibility.

Subtle interpretation is crucial to distinguish between an abnormal chest radiograph needing urgent medical attention and

an abnormal chest radiograph with normal post-operative changes. The opinion of experienced and trained radiologist is invaluable to the diagnostic care of the patient.

REFERENCES

1. Stiller K, McInnes M, Huff N and Hall B. Do exercises prevent musculoskeletal complications after cardiac surgery? *Physiotherapy Theory and Practice* 1997;13: 117-126.
2. El-Ansary D. Musculoskeletal problems following CABG: A comparison between saphenous vein and internal mammary grafting. (Abstract). 1995; Proceedings of the 4th National Cardiothoracic Special Group Conference of the Australian Physiotherapy Association. Melbourne, p. 29.
3. Selvaratnam PJ, Matyas TA and Glasgow EF. Noninvasive discrimination of brachial plexus involvement in upper limb pain. *Spine* 1994; 19: 26-33.
4. Vander Salm TJ, Cerada JM and Cutler BS. Brachial plexus injury following median sternotomy (Part I). *Journal of Thoracic and Cardiovascular Surgery* 1980; 80: 447-452.

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