TRAUMATIC HAEMOMEDIASTINUM: A CASE REPORT

GEORGE COHEN, M.B., B.CH., D.M.R.D., R.C.P.& S.

Department of Radiology, Johannesburg General Hospital

Traumatic mediastinal haematoma is a rare condition. Endress[1] apparently came to that conclusion, for he wrote: 'Search of the literature proved almost fruitless. One brief extract of such a case was found in the October 1916 issue of this journal (American Journal of Roentgenology—Korner[2]). Two other isolated case reports were by Duyster[3] and Schmitt[4] respectively. Horn[5] described a further case.' Endress[1] continues: 'Personal enquiry was made of several radiologists known to be particularly interested in chest lesions, but none could recall seeing a haematoma of the mediastinum from trauma.'

Other cases described in the literature and not mentioned by Endress[1] are those of Eiselsberg and Gold (1931),[6] Zimmermann (1936),[7] Vincent *et al.* (1953),[8] and Laforet (1955).[9]

The aetiological factors have varied considerably. Horn's case[5] was caused by a stab wound penetrating into the chest. The cases of Eiselsberg and Gold[6] were due to fractures of the thoracic vertebrae. Both Schmitt's case[4] and Duyster's case[3] were due to multiple chest injuries, whilst Endress's cases[1] were caused by 'steering-wheel' automobile accidents. Zimmermann's case[7] was due to lateral compression of the thoracic cage. Kerley (1957)[10] has stated that he has seen the condition as a result of operative trauma to the neck in cervical sympathectomies, whilst Kessler (1957)[11] mentions a mediastinal haematoma found post mortem after a carotid angiogram.

CASE REPORT

A young adult Bantu male from whom an adequate history could not be obtained because of language difficulties, was thought to be suffering from injuries to his thoracic cage. He was not dyspnoeic, but appeared to be very shocked. He was not in great pain.

X-ray Examination

The first X-ray of the chest was taken on 8 January 1957 (Fig. 1). Radiographs of ideal diagnostic quality were difficult to obtain because the patient could not be made to understand that he should stop breathing; nor was he able to stand erect with any ease. However, on the available postero-anterior radiographs there was obviously gross widening of the mediastinal shadow. There was, in addition, an opacity occupying part of the middle third of the left hemithorax, which on the lateral view was seen to be situated in the anterior basal segment of the left lower lobe and in the left lingula.

On the basis of these findings a diagnosis was made of mediastinal haemorrhage, together with pneumonic consolidation of the affected lingula and lower lobe segments—the latter it was thought, being in the nature of a 'contusion' pneumonia. As a result of this diagnosis the patient was examined in minute detail and a tiny (2 mm.) puncture wound was found on the left side of the neck over the sternomastoid muscle about 1 inch above its insertion. Subsequently an interpreter was found who spoke the patient's dialect and from whom we learned that this wound was caused by a 'bicycle-spoke' with pointed tip—a not unusual weapon in these parts!

X-rays (Figs. 2-5) taken during the next 10 days showed rapid and progressive diminution of the width of the mediastinal shadow and almost no change in the region of consolidation in the middle third of the left hemithorax.

The opaque left lingula cleared rapidly thereafter, and the lower lobe somewhat less rapidly but just as definitely.

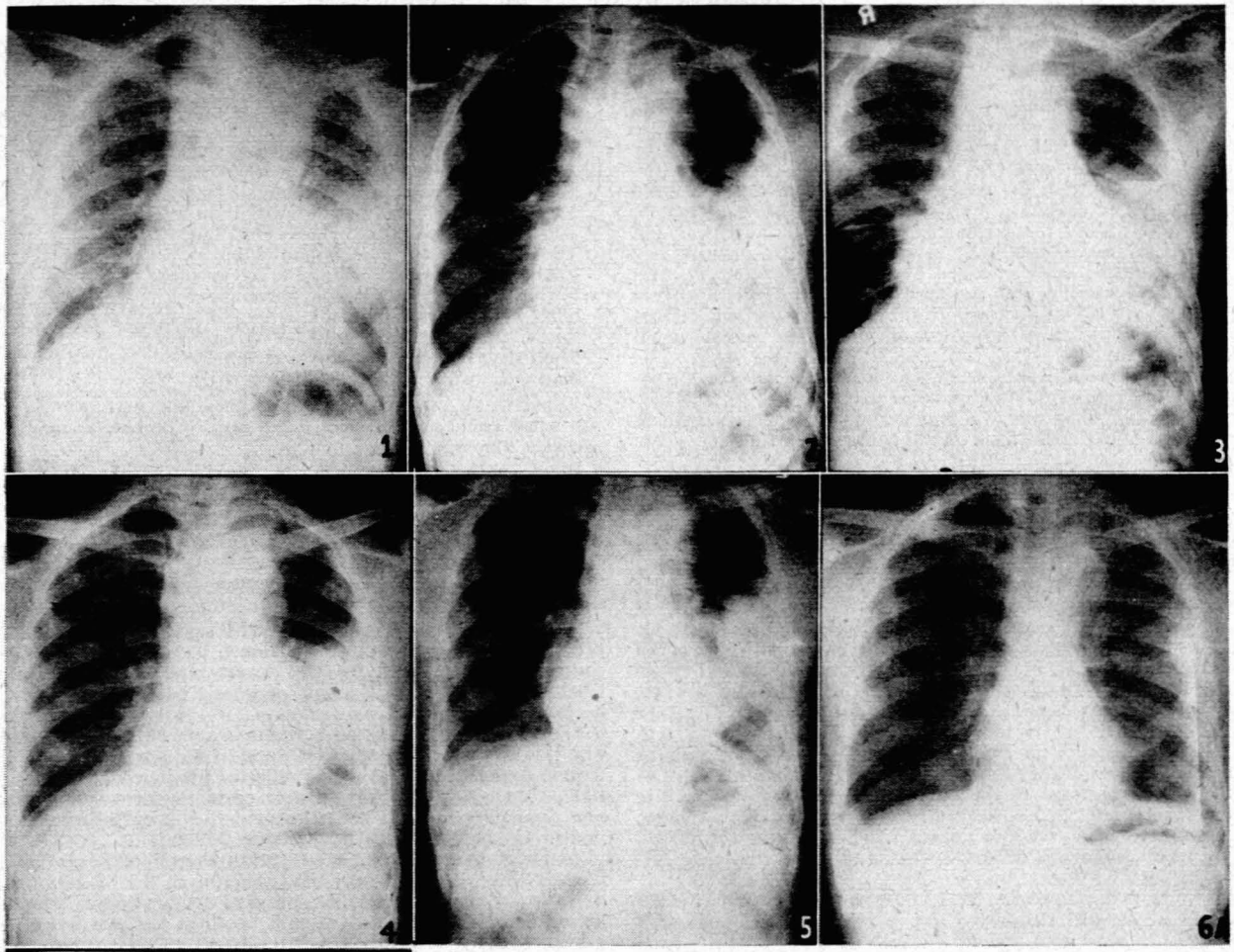
When the patient was discharged on 4 February 1957 (Figs. 6a and 6b), except for some slight widening in the region of the aortic knuckle and in the extreme left apex, the condition had returned almost to normal.

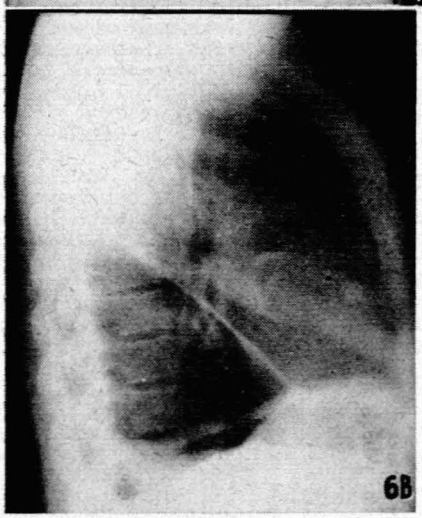
DISCUSSION

These radiological findings are not dissimilar to those of Zimmermann's case[7] in which at first 'the mediastinal shadow was markedly widened' and later 'there was gradual absorption of the mediastinal haemorrhage with residual increase in breadth and density of the right hilus shadow from organization of the haematoma'. Endress's case 1 showed lateral bulging of the superior mediastinum to the right, with a sharp border; 18 days later the radiograph appeared normal.

Duyster's case[3] showed lateral bulging on the left side. Golden (1950)[12] described mediastinal haematoma as a condition in which there is a 'straight and sharp border to the widened mediastinum and if much blood accumulates the pleura tears and blood is then in the pleural space'.

It is felt by both Endress[1] and Laforet[9]—and in this I agree—that many more cases of mediastinal haematoma have occurred than have been reported in the literature. One of the reasons for this suspected frequency is the number of 'steering-wheel' injuries. I agree with Endress,[1] who felt that 'one reason for lack of reports is that films of injuries to the chest are usually done with Bucky technique at short distances and the mediastinum is ignored because of the expected distortion'. In addition, I feel that in all suspected injuries to the thoracic cage or neck a postero-anterior radiograph of the chest should be done as a routine measure.





Figs. 1 to 6

SUMMARY

A case of traumatic mediastinal haemorrhage—a rare entity—is presented. This is the first reported case of such a condition being due to a stab wound in the neck.

I wish to thank the Chief Radiologist, Dr. Josse Kaye, for his advice and encouragement, and Dr. I. Strasburg for the radiographic facilities granted me. I should also like to record my thanks to Mrs. Stopforth for the photography and Miss. W. Hicks for the radiography.

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