

# Fallacy In Examining The Chest With Gloved Fingers In The Emergency Room

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## Abstract

It is a normal and accepted practice to examine trauma patients in the emergency department by wearing gloves as a part of universal precautions. The important sign of hyper-resonance on percussion of the affected side of the chest in a case of pneumothorax is emphasized in many medical textbooks. The importance of this sign differentiates a tension pneumothorax from cardiac tamponade and necessitates insertion of a chest drain even before taking an x ray. We report a case where the signs of pneumothorax and surgical emphysema were missed in the emergency room while examining the patients with gloved fingers and revealed when the patient was re-examined without gloves.

## CASE REPORT

A 50 year old lady presented to the A&E with a history of fall from a staircase 24 hours prior and complained of chest pain and mild difficulty in breathing. There was no history of trauma to the head or neck during the fall. The patient was examined by a doctor who was wearing a pair of gloves. On initial assessment, the airway was clear and there was no tenderness over the cervical spine. On examination of the chest, movements of the left side were slightly decreased compared to the right. Trachea was central in position. There was tenderness in the left infra-axillary and mammary regions. Percussion of the chest did not show any variation in the resonance compared to the opposite side. Air entry was found to be decreased on the left side. All her observations and SpO<sub>2</sub> were within normal limits. Circulation was also normal.

A chest X ray was performed which showed significant pneumothorax on the left side. The patient was re-examined by another colleague and he was able to elicit surgical emphysema in the subcutaneous tissues on the left side of the chest and a hyper-resonant note on percussion. This valuable clinical finding was missed initially as the examining doctor was wearing a glove while palpating and percussing the chest. Re-examination of the patient again with gloved fingers failed to show the above signs. The patient subsequently had a chest tube inserted and was transferred to the ward where she made an uneventful recovery.

It is a normal and accepted practice to examine trauma patients in the emergency department by wearing gloves as a part of universal precautions. The important sign of hyper-resonance on percussion of the affected side of the chest in a case of pneumothorax is emphasized in many medical textbooks (Ref.<sup>1, 2,3,4,5</sup>). The importance of this sign differentiates a tension pneumothorax from cardiac tamponade and necessitates insertion of a chest drain even before taking an x ray. As illustrated by the above example it is sometimes possible to miss subtle clinical signs like hyper-resonance on percussion and the palpatory feel of surgical emphysema while examining a patient with gloves on. In our case the second doctor who examined the case did not have any gloves on and he was able to elicit the findings. In our view emergency department doctors need to be aware of this fallacy while examining trauma patients, which can lead to serious errors in clinical judgement.

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