

Heuristics or analytical?

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Learning objectives: Determining the correct diagnostic can be sidetracked by atypical disease presentations or by diseases unseen by which the doctor. This is why all of the trained medical staff should collaborate by making use of their own references in order to reduce the incidence of misdiagnosis.

Case information: We present the case of a 20-years-old man, presented to our hospital during the testing of a clinical decision support system for medical students and young doctors. The patient showed a stage I dyspnea (mMRC scale), emphasized under effort and accompanied by chest pains installed 2 days prior to his arrival at the hospital. The symptoms appeared after the patient underwent a medium physical effort. In the two days prior to arriving at the hospital, the patient was consulted by a general physician who, after not taking an X-Ray due to limited resources, performed a clinical exam after which he concluded that the pain was caused by a dose of effort followed by muscular fever. After this examination, the patient had also received indications from a pharmacist that he should take a combination of potassium and magnesium which would relieve his chest pain. After doing so, the pain indeed diminished.

While the senior doctor performed the clinical exam, which revealed pale teguments, diminished breath sounds with a peripheral oxygen saturation of 97% and a heart rate of 98 bpm, the young doctor introduced the collected data in the clinical decision support system, which outlined a pneumothorax as a potential diagnosis. The chest X-ray revealed a massive bilateral pneumothorax which led to addressing the patient to thoracic surgery!

Discussion: Although the patient arrived at the hospital on his own and the correct diagnostic and remedy were given in time, the consequences could have been disastrous if he might have decided to just follow the initial treatment. This presentation showcases the importance of medical staff collaboration and regular use of Clinical Decision Support Systems in reducing the incidence of misdiagnose.