

Pneumothorax case study

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The metal punctured his chest wall through his right fourth intercostal space through to the pleural cavity. Following the injury, he suddenly became breathless, had a fast pulse, and severe right-sided chest pain. Examination revealed that the man had a hyper-expanded chest on the right side and absent right-sided breath sounds. A diagnosis of a large open pneumothorax was made.

Note: In an open pneumothorax there is an open hole into the pleural cavity that allows the free passage of air in and out of the pleural cavity. . Starting with the skin, state the layers of the chest wall that the metal has passed through to get to the pleural cavity. Skin, fat, external intercostal muscle, internal intercostal muscle, innermost intercostal muscle, endothoracic fascia, and parietal pleura. 2.

Describe the pleural coverings of the lung and outline their role(s) during breathing.

The pleural membrane has two layers. The parietal layer is the outer layer and it lines the inside of the rib cage and the diaphragm. The visceral/pulmonary layer covers the lungs. The pleural space is the fluid in between the parietal layer and the visceral layer and the fluid is secreted by the membranes. This fluid is there because it allows the two layers to slide easily over on another as the lungs inflate and deflate during respiration.

3.

Explain what happens to alveolar or Intrapulmonary pressure, compared to atmospheric pressure. During inspiration and expiration. Atmospheric pressure is the pressure exerted by gases of the atmosphere.

Intrapulmonary pressure is the pressure within the alveoli of the lungs.

4. Explain what will happen to the pressure within the pleural cavity during a pneumonia and explain how this will affect the lung. The lung tissues recoil, and the lungs collapse.

In a healthy lung, the visceral pleura and parietal pleura are held together by surface tension, which occurs because the water molecules in the serous fluid between the two membranes are attracted to one another. In pneumonia patients, this is prevented. Explain why a pneumonia can lead to Dreamlessness.

Pneumonia means collapsed lung and occurs when air becomes trapped in the space around the lungs and this can cause the lung to collapse and put pressure on the heart, also making it hard or impossible for someone to breath