Were Pneumothorax and Its Management Known in 15th-Century Anatolia?

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Sabuncuoglu (1385–1470) was a surgeon who lived in Amasya (in Anatolia). In 1465, he completed Cerrahiyyet’ül Haniyye (Imperial Surgery), the 1st illustrated surgical textbook in the Turkish–Islamic medical literature. We describe the highlights of the book’s recommendations concerning treatment of thoracic trauma, particularly of pneumothorax. We reproduce 2 of the colored miniature illustrations and add our comments regarding the advice of Sabuncuoglu. Most notably, he advocated “mihceme,” a cupping therapy, as a simple technique of thoracic aspiration. (Tex Heart Inst J 2009;36(2):152-3)

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Key words: History of medicine, 15th cent.; medical illustration/history; pneumothorax/therapy; thoracic surgery/history

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The author’s anatomic knowledge is also apparent in his description of costal fractures. As was true of sternal fractures, he observes that ribs are usually broken in their posterolateral extensions, and rarely in the anterior. This, he says, can be attributed to the cartilage structure of the ribs at the front. The most important technique for diagnosing costal fracture is manual examination, he adds. If fractured bone has pierced the pleura, the patient may manifest shortness of breath, cough, and hemoptysis. Sabuncuoglu reports that management of this condition (puncture of the pleura) is difficult. Although he doesn’t use the term pneumothorax, it is clear that he is describing that condition. The chest tube was unknown in the 15th century, but one of Sabuncuoglu’s management methods is of considerable interest: after incising the traumatic area, the surgeon places a tool on the region of the fracture and performs a procedure known as “mihceme” (aspiration by negative pressure).

Mihceme is a “cupping therapy” that has been in traditional use in Anatolia, in China, and in other lands and cultures since ancient times—a procedure in which the skin is incised and blood drawn by suction. Customarily, a flame was introduced into a glass to burn the oxygen and create a vacuum (Fig. 2). In recommending mihceme in instances of rib fracture into the pleura, Sabuncuoglu is, in our estimation, describing simple pneumothorax aspiration. He indicates that this management gives good results.

More difficult yet was the management of patients who had sustained arrow injuries of the thorax in which the blood coming from the wound was frothy, the neck of the patient was swollen, and the patient was short of breath. As far as can be understood from the book, Sabuncuoglu describes pleural drainage for empyema but does not describe closed underwater drainage for pneumothorax, which was unknown at that time.

**Conclusion**

It can be easily said of Sabuncuoglu that he was one of the pioneers of thoracic surgery. He described the removal of foreign bodies from the esophagus, the use of a silver ringlet after tracheostomy, and (in detail) the technique and required instruments for pleural drainage in cases of empyema.

Sabuncuoglu developed surgical methods for application to pediatrics, urology, abdominal surgery, obstetrics, gynecology, otorhinology, and even cosmetic surgery.

His color illustrations in this book are enough by themselves to prove him a good medical educator. In the words of Sabuncuoglu himself, “Write what you do, teach what you know—future generations will be grateful to you.”

**References**