

An alternative to chest tube thoracostomy equipment

Göğüs tüp torakostomi ekipmanı için bir alternatif

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Thoracic surgery is a very important specialty, particularly for post-traumatic emergencies. However, it is available in a few hospitals in the world and in Türkiye. Chest tube thoracostomy is an essential procedure that may have serious complications. A chest tube and drainage system may also be needed in cases such as war, natural disaster, or after trauma which occurs at a distance from the center. Chest tube thoracostomy is a procedure performed by thoracic surgeons. Unfortunately, in cases where a thoracic surgeon is not available, the intervention cannot be performed or is performed late.

It is known that catheters used instead of chest tubes, such as the pleural drainage catheter and the pig tail catheter, show similar success in both pneumothorax and hemothorax.^[1-4] We believe that alternative materials can be life-saving in cases where the standard chest tube and underwater drainage system used during the tube thoracostomy procedure is not available or when their number is insufficient due to mass interactions. In cases of hemopneumothorax, the thickest possible aspiration catheter can be used after opening the thoracostomy from the standard placement. The use of a urine bag at the tip of the aspiration catheter can replace the underwater drainage system. When the upper part of the urine bag is punctured, the air that will fill the urine bag will be able to escape. There is a structure inside the urinary bag that acts as a Heimlich valve. This structure will prevent the air and blood discharged from the thorax

from returning to the pleural space. A simple aspiration catheter and urine bag, which can be found in every hospital or ambulance, can be used instead of a chest tube and underwater drainage system in emergency situations and can be life-saving, until the chest tube and drainage system are reached.

The three-sided taping method is the main method traditionally used in open pneumothoraces. In these patients, where entry into the ribcage is directly visible or confirmed by finger, an aspiration catheter can be simply and quickly placed in the ribcage and connected to the urine bag, after cleaning the wound edge with povidone-iodine. This equipment will treat pneumothorax and hemothorax similarly to a tube thoracostomy.

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