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Pneumothorax drainage device

TECH ID #: 1236.2

Background

Spontaneous pneumothorax is a significant global health problem with an estimated incidence of 7-37/100,000 people per year or up to 2 million events per year globally. Air in the chest cavity can sometimes resolve itself but often requires a hospital admission and more importantly, lifesaving urgent medical care. In a military combat setting, about 13% of penetrating wounds to the thoracic cavity require thoracic intervention including a chest tube, contributing up to 30% of combat deaths.

The hallmark treatment of a symptomatic pneumothorax is insertion of an intercostal drain, however this skill is limited to health care practitioners with adequate training. The complication rate from chest tube insertion can be as high as 30% including nerve injury, lung or other organ puncture, inadequate positioning, or infection. There is a desperate need to reduce complication rates and this can be achieved through a combination of better health care practitioner training as well improvements to the technique and insertion device.

The pneumothorax drainage device incorporates features for depth control and cavity recognition to enable the proper positioning and drainage of pneumothoraxes thereby improving treatment both in the hospital and in the field by military and EMS/first responders.

Areas of Application

Primary market: military and emergency /first responders

Other markets:

- insertion of other devices - PEG tube, chest tubes
- additional applications - abdomen, urology, veterinary medicine

Competitive Advantages

- Depth control
- Cavity recognition
- Ease of use for less experienced personnel

Stage of Development & Intellectual Property Status

- Prototype under development
- Patent pending