Needle assembly for relieving a pneumothorax

Reference No: B77122

CHALLENGE
The standard procedure to treat a pneumothorax is a mini-thoracotomy i.e. a medical surgery to open the thoracic cavity wall with a scalpel or scissors followed by introduction of a flexible tube into the pleural cavity to reinstate the vacuum. In the life-threatening event of a tension pneumothorax, the thorax will first be punctured with a needle, followed by a mini-thoracotomy. The mini-thoracotomy is time consuming, complex and needs experienced personnel.

INNOVATION
The innovative needle assembly here is one simple medical instrument that provides all processing steps needed to relieve a pneumothorax and directly allows a safe patient transport without any additional procedures.
The needle assembly comprises a double-curved Veress cannula with a cutting end for puncturing the thoracic cavity. Inadvertently cutting of the lung is avoided by the safety mechanism of the cannula. A fixing bulge holds the device in its position and seals the incision. The proximal end portion of the needle assembly can be connected to a suction tube to remove fluid or gas from the cavity while the intrusion of air into the pleural cavity is prevented by a one-way valve.

COMMERCIAL OPPORTUNITIES
Major advantages of the new device are:

- The pneumothorax can be relieved with only one medical instrument which is crucial in emergency situations, lacking fully medical trained personnel, time and surgical equipment
- One fast step, directly enabling a safe patient transport
- The device can equally be used for relieving an accumulation of liquid in the pleural cavity (e.g. a hemothorax)
- The design prevents serious inadvertent injuries by the cutting end during movement of the thoracic cavity or lung and guides the unexperienced user

DEVELOPMENT STATUS
Currently searching for partners for further development and licensing

Technology from
UNIVERSITÄTSKLINIKUM REGENSBURG

IP rights:
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Contact:
Dr. Katrin Bercht
+49 (0) 8954801 77-16
kbercht@baypat.de

Bayerische Patentallianz GmbH
Prinzregentenstr. 52
80538 München
www.baypat.de