Chest Tube Thoracostomy

Chest tube thoracostomy is done to drain fluid, blood, or air from the space around the lungs. Some diseases, such as pneumonia and cancer, can cause an excess amount of fluid or blood to build up in the space around the lungs (called a pleural effusion). Also, some severe injuries of the chest wall can cause bleeding around the lungs. Sometimes, the lung can be accidentally punctured allowing air to gather outside the lung, causing its collapse (called a pneumothorax). Chest tube thoracostomy (commonly referred to as "putting in a chest tube") involves placing a hollow plastic tube between the ribs and into the chest to drain fluid or air from around the lungs. The tube is often hooked up to a suction machine to help with drainage. The tube remains in the chest until all or most of the air or fluid has drained out, usually a few days. Occasionally special medicines are given through a chest tube.

Common reasons for its use and benefits:

- **Collapsed lung (pneumothorax)** - Air has built up in the pleural space from a leak in the lung. This leak may be the result of lung disease. It can also occur as a risk (complication) of certain procedures. Chest tubes are frequently needed to remove air from around the lung. Failure to remove such air can be life-threatening. Removing the air allows the lung to re-expand and seal the leak.
- **Infection** - If the fluid building up around the lung is infected, it may be necessary to insert a chest tube to remove the fluid.
- **Cancer** - Some cancers spread and cause large amounts of fluid to build up around the lung. Doctors usually drain the fluid with a needle (see Information Sheet on Thoracentesis). If the fluid keeps coming back, however, it may be necessary to insert a chest tube to first drain the fluid, and then deliver special medicines into the chest that reduce the likelihood of the fluid building up again.
- **Comfort** - A large build up of fluid or air in the chest can make it difficult to breathe. Removing some of the fluid or air may decrease discomfort.

Risks:

Some of the risks of chest tube thoracostomy include:

- **Pain during placement** - Discomfort can result as the chest tube is inserted. Doctors try to lessen the pain with a local numbing medicine (anesthetic like novocaine). The discomfort can be severe at first but usually decreases once the tube is in place.
- **Bleeding** - During insertion of the tube, a blood vessel in the skin or chest wall may be accidentally nicked. Bleeding is usually minor and stops on its own. Bleeding can occur as a bruise of the chest wall. Rarely bleeding can occur into or around the lung and may require surgery.
- **Infection** - Bacteria can enter around the tube and cause an infection around the lung. The longer the chest tube stays in the chest, the greater the risk for infection. The risk of infection is decreased by special care in bandaging the skin at the point where the tube goes into the chest.

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