Thoracentesis

Thoracentesis is done to figure out what may be causing fluid to build up in the chest around the lungs (called a pleural effusion). Some diseases, such as pneumonia and cancer, can cause a large amount of fluid to build up in the space around the lungs. Thoracentesis involves placement of a needle and/or thin, hollow plastic tube in between the ribs and into the chest to get some of the fluid for testing. Thoracentesis may also be done to make patients more comfortable, by relieving some of the pressure on the lungs. The needle (or tube) is removed after a few minutes when the procedure is completed.

Common reasons for its use and benefits:

When the cause of a build up of fluid inside the chest is not known, getting a sample of the fluid can help in reaching an answer. The most common reasons for doing a thoracentesis are:

- New effusion - Thoracentesis may be done on any patient with the new onset of fluid in the chest without obvious cause to help make a diagnosis.
- Infection - When an infection is suspected in the fluid in the chest, thoracentesis may be done to help make a diagnosis.
- Cancer - Some cancers spread and cause fluid to build up in the chest. In this situation, thoracentesis may be done to help make a diagnosis. Thoracentesis may be the simplest way to get a sample of cancer cells to make a diagnosis.
- Comfort - A large build up of fluid can be painful and interfere with being able to breathe. Removing some fluid may decrease discomfort.

Risks:

Some of the risks of thoracentesis include:

- Pain during placement - Discomfort can result from the needle stick at the time it is inserted. Doctors try to lessen the pain with a local numbing medicine (anesthetic like novocaine). The discomfort is usually mild and goes away once the needle or catheter is removed.
- Bleeding - During insertion of the needle through the skin and chest wall, a blood vessel 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 might require drainage or surgery (see related Information Sheet on Chest Tube Thoracostomy).
- Collapsed lung - During insertion, the needle may, rarely, puncture the lung. This hole may seal quickly on its own. If the hole does not seal over, air can build around the lung and cause it to collapse (this is called pneumothorax). In such cases, a chest tube is sometimes used to drain air from around the lung (see related Information Sheet on Chest Tube Thoracostomy).

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