

PLEURAL EFFUSION

- A pleural effusion is a collection of fluid within the chest, lying between the lung and the chest wall
- There are a number of different potential causes of a pleural effusion, and the exact management will depend upon the actual cause

What causes a pleural effusion?

The most common causes of a pleural effusion are:

- Heart failure
- Pneumonia (infection)
- Cancer
- Other possible causes include pulmonary embolism (clots in the lung), viral infection with pleurisy, liver disease, and following heart surgery (to name a few).

How is the cause of pleural effusion determined?

- Determining the cause of a pleural effusion is vital before any plan for treatment can be made. There may be a number of tests that need to be performed - this may be a somewhat frustrating time.
- It is not always necessary to be in hospital while these tests are being undertaken
- There are a number of factors that are important in determining the cause of a pleural effusion:
 - symptoms and signs, and patient examination
 - chest Xray
 - draining some fluid from the effusion in order to send away for testing provides important information
- If these investigations do not yield a likely diagnosis, a number of other tests may be necessary to make the diagnosis, including:
 - CT scan of the chest
 - Bronchoscopy
 - Video - assisted thoracoscopy
- Fluid is normally obtained from the effusion by placing a small needle through the chest wall into the fluid pocket and collecting some. This fairly minor procedure, a 'pleural aspiration' involves local anaesthetic only and generally only causes minor discomfort
- Sometimes, fluid may need to be removed from the lung by placing a 'chest tube' into the fluid through the chest wall.
 - The tube is then left in the chest wall to drain the fluid over a number of days
 - This procedure is performed under sedation (not general anaesthetic) and can result in some discomfort where the chest tube is placed
 - this tube will usually remain in the chest for between 2 days and 1 week

How is a pleural effusion treated?

- This depends on the cause – for example pneumonia is treated with antibiotics, pulmonary embolism with blood thinning agents, heart failure by removing fluid from the body, etc
- In most cases, treatment of the cause of the effusion will result in the effusion going away
- Occasionally it is not possible to stop the fluid from recurring
 - in this circumstance, it may be necessary to prevent the fluid from redeveloping by attempting to make the lung 'stick' to the chest wall
 - sticking the lung to the chest wall can be done by inserting a kind of 'glue' through the chest tube into the chest, in a procedure called 'pleurodesis'
 - alternatively, a surgical procedure may be undertaken to make the lung stick to the chest wall

Will a pleural effusion come back after treatment?

- This again depends on the cause – e.g. if the effusion is from heart failure, adequate control of the heart failure will generally prevent it from coming back
- In the case of an effusion due to cancer, there is a chance the effusion will redevelop even after pleurodesis (the 'glue')

