
LUNG BIOPSY

What is a lung biopsy?

A lung biopsy is the procedure where a small sample of lung is taken. It is usually done via a small incision (cut) made in the chest wall, between the ribs. The sample of lung obtained in this way can then be examined under the microscope, and the finding can help your child's Respiratory specialist to better advise you on your child's problem and possible treatments.

Who needs a lung biopsy?

The vast majority of children with chest problems do not need a biopsy for us make a diagnosis, or to know how best to treat them. However, a small number of children have lung problems that are very difficult to diagnose with Xray or lung function tests. In these illnesses, there is often no clearly defined treatment. Your child's Respiratory Specialist may advise performing a lung biopsy to confirm the exact nature of the lung problem, and also to guide the choices of treatment.

How is it done?

A lung biopsy is performed under general anaesthetic, by a surgeon who is experienced in this procedure. Nowadays it is by keyhole surgery called VATS (Video Assisted Thoracoscopic Surgery).

The advantage of VATS is the period of recovery is shorter, and the post operative pain is less. Thus a child who has a biopsy by VATS will recover quicker, and be well enough to go home that bit sooner. If your child is being recommended for a lung biopsy, you can discuss this and any other aspects of VATS with the surgeon who will perform the procedure.

What problems might the biopsy show?

A biopsy is usually suggested for children whom we think may have an interstitial lung disease. There is a separate information sheet on interstitial lung disease. Biopsies may also be taken if there is concern that an unusual infection is present. It may also be done if there is concern that there may be malignant disease in the lung, or in children after they have had a lung transplant. If malignant disease was a worry to your doctors they will discuss this with you before a biopsy. If it has not been mentioned, it is because it is not thought to be the cause of your child's problem.

Are there any problems from having a biopsy?

After a biopsy, a child usually needs to have a chest drain in place for a couple of days. This is to allow air that has got into the space between lung and ribs to drain away. This allows the lung to fully expand. The area will obviously be sore, and regular analgesia will be given. This may be a powerful opiate analgesia at first, and be reduced as your child recovers.

After a biopsy some children need to be looked after on the Intensive Care Unit for a day or two post operatively. This is much more likely for a child in oxygen therapy before the operation. Very rarely, a child with a significant amount of lung inflammation can develop a fistula after a biopsy. A fistula is a persisting connection between two parts of the body – in this case between the lung and the pleural space. This may require a second spell in theatre to repair the fistula. This complication is very rare.

Are there other ways to get the same information?

A biopsy provides detailed information about the lung tissue. Other techniques can only give us a few bits of the total information we can get from a biopsy. If a biopsy is recommended for your child, it is because the other techniques have not allowed us to make a full diagnosis of your child's condition. A lung biopsy is only ever recommended as the final step in understanding a child's lung problem.

This information sheet is produced to answer some of the questions parents ask about lung biopsy. It is not intended to replace discussion with your child's respiratory Specialist; and you are encouraged to discuss your child's condition with the specialists when you attend clinic.