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Trans-Sternal Mediastinal Biopsies

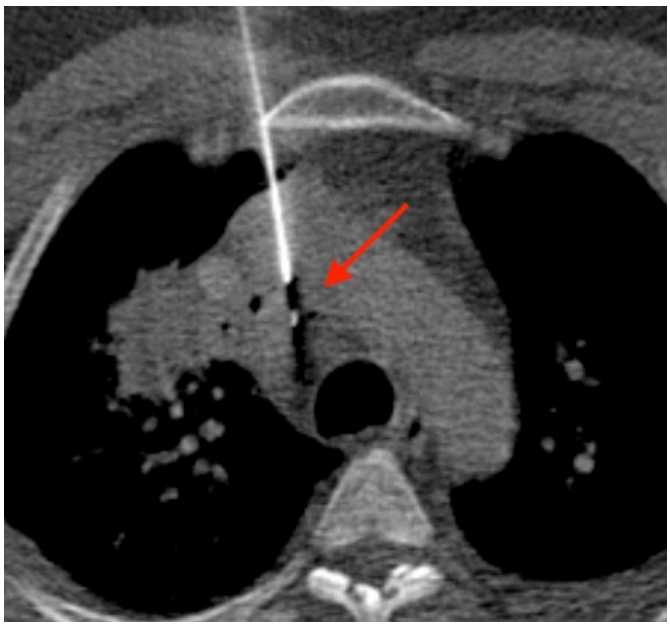

Fig. 1: Biopsy of a right paratracheal mass (arrow) using a traditional para-sternal, transpulmonary approach. Tuberculosis.

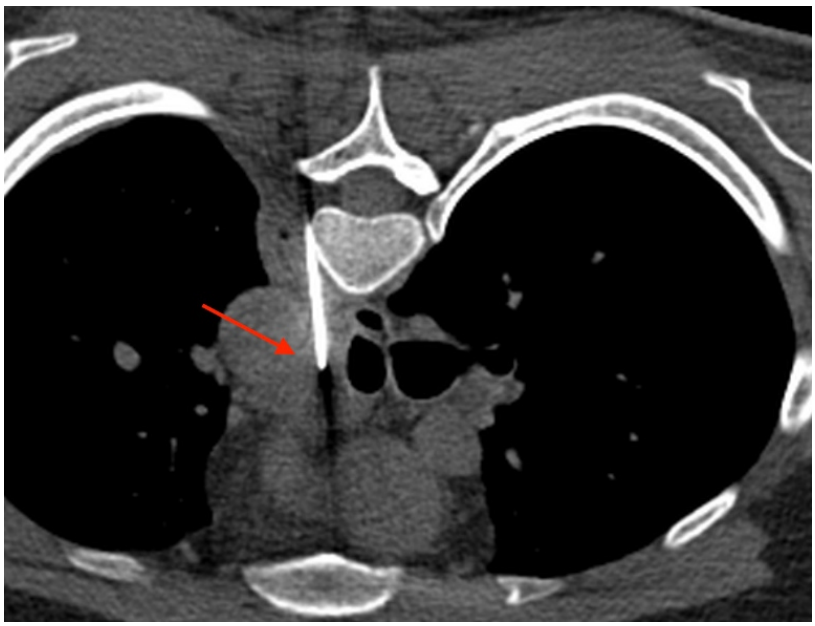

Fig. 2: Biopsy of an aorto-pulmonary window mass (arrow) in the prone position using an extrapelural approach. Lymphoma.

There are many approaches to mediastinal masses. Large lesions are easily approachable from anterior or posterior depending on the location. However smaller masses and nodes may be difficult to approach directly. While it is often possible to use a trans-pulmonary route (Fig. 1), the chance of pulmonary complications makes it more desirable to use extrapleural approaches (Fig. 2).

One such is the trans-sternal route. The manubrium sternum is a thin bone. If there is a lesion situation behind the sternum, instead of trying to angulate the needle sideways or from the superior aspect, perhaps the simplest method is to lightly tap the needle into the manubrium and then enter the lesion, posterior to the sternum and biopsy it (Figs. 3-5).

The risk of complications is negligible because the needle does not traverse the lung or any major structures.

Trans-Sternal Mediastinal Biopsies

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At a glance

- *It is easy to biopsy mediastinal masses when they are large and approachable.*
- *Extrapleural approaches help with lesions like subcarinal nodes.*
- *For other areas, innovative approaches like a trans-sternal route help reach otherwise difficult areas.*

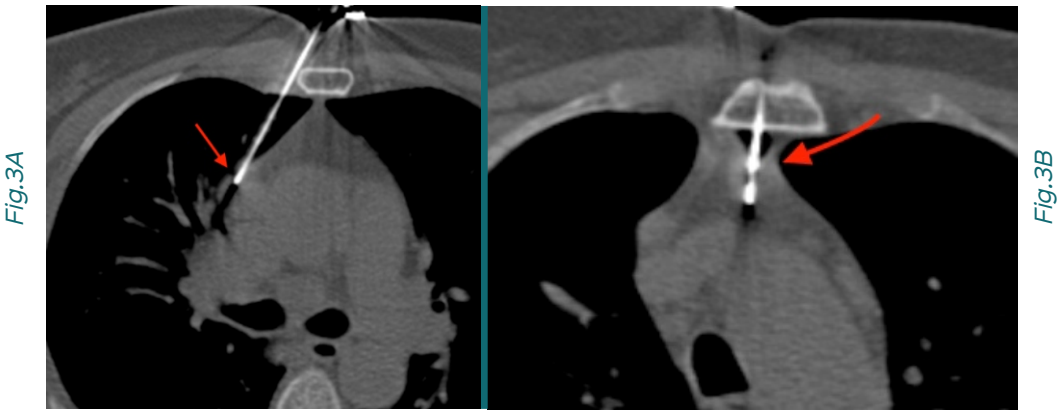

Fig.3A *Fig.3B*

Fig. 3: In this patient a trans-pulmonary approach was first attempted for a precaval node (arrow). This was unsuccessful. After a lot of thought, we did our first trans-sternal biospy (arrow) for the node immediately posterior to the sternum. Tuberculosis.

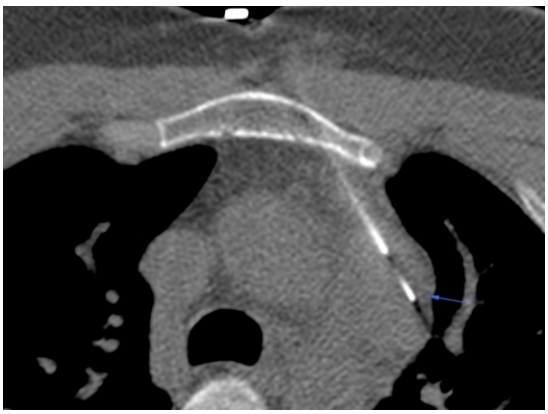

Fig. 4: Left para-aortic nodal mass. Instead of a traditional para-sternal approach, a trans-sternal route was preferred. This is safe and adequate material can be obtained. Tuberculosis.

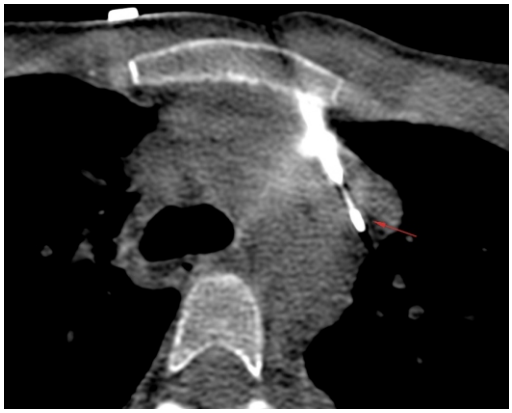

Fig. 5: Another left para-aortic nodal mass. Again, instead of a traditional para-sternal, trans-pulmonary approach, a trans-sternal approach yielded pus and was GeneXpert positive for MTB, rifampicin sensitive.

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