

CASE REPORT

Cervicobrachial Neuralgia Revealing a Pulmonary Apex Hydatid Cyst

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Abstract

A 35-year-old patient with no history of smoking, presented with recurring episodes of low abundance hemoptysis and cervicobrachial neuralgia. Radiological imaging showed a mass in the apex of the superior right lobe. The patient underwent surgical resection with optimal outcomes. Pathology results showed the mass to be a hydatid cyst. This case report argues that hydatidosis should be considered in the differential diagnosis of Pancoast tumors, especially in regions where it's endemic.

Keywords: Lung, Hydatidosis, Pancoast.

1. Introduction

Superior sulcus tumors, also known as Pancoast tumors, are generally malignant tumors invading the apex chest wall. They present with many characteristic symptoms: cervicobrachial neuralgia, hand and arm muscle atrophy, anhidrosis, one-sided facial flushing and sweating [1].

These symptoms are usually associated with pulmonary apex squamous-cell carcinoma (SCC). They can also result from other malignant tumors and from metastasis developing in the region. However, much more benign diseases can also be a cause, one example of that is hydatid cysts. Hydatidosis can take any location in pulmonary tissue. Located in

the pulmonary apex, or expanding to that region, this disease can mimic Pancoast tumors. This case provides an example of that.

2. Case report

A 35-year-old male patient presented with low abundance hemoptysis and right plexus cervicobrachial neuralgia. He had no prior history of smoking, and a history of hepatic hydatid cysts surgically removed 2 years ago. The patient had a hydropneumothorax after the surgery. Physical examination revealed muscular atrophy and paresthesia in the right upper limb.

Chest X-ray showed a right apex lesion, containing several serpiginous and nodular opacities (figure 1).



Figure 1. Postero anterior chest X-ray showing a right apex opacity

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Chest CT revealed several right apex pulmonary hydatidcysts. The most massive cyst was connected through a fistula to the bronchi (figure 2).

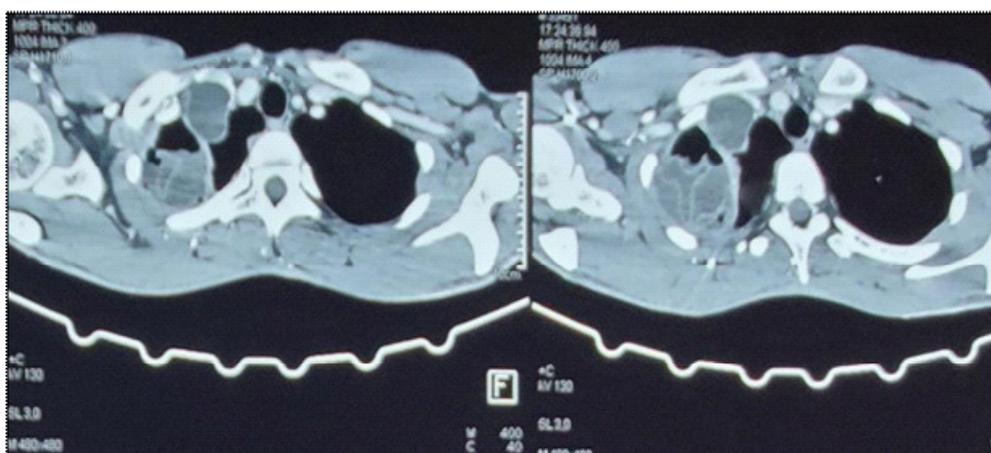


Figure 2. Injected chest CT scan showing right upper lobe pulmonary hydatidcysts

A cervico-thoracic MRI was prescribed due to the apex localisation of the tumor and the presence of neurological symptoms. It showed many right apex pulmonary hydatidcysts that were compressing the brachial plexus (figure 3)

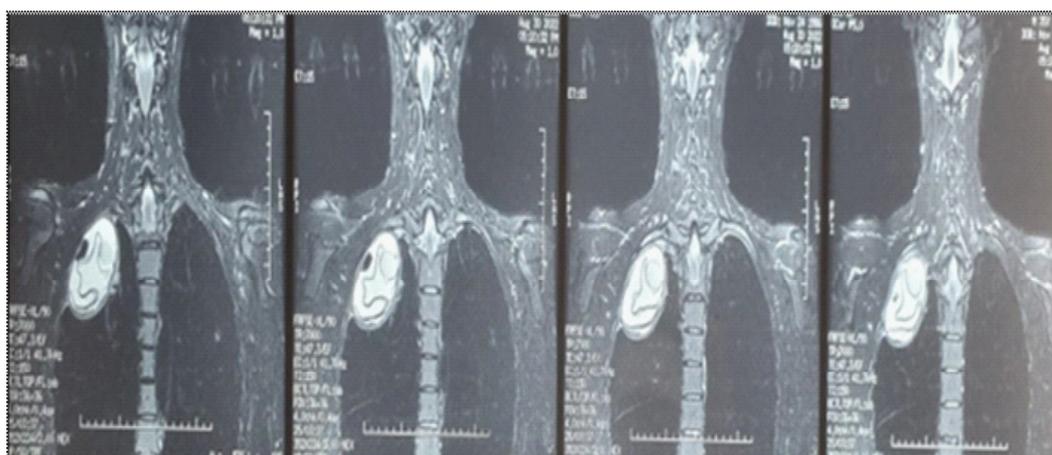


Figure 3. Cervico-thoracic MRI show casing right apex hydatidcysts compressing the brachial plexus.

The patient first underwent a conservative posterolateral video-assisted thoracotomy (VATS) through the 4th intercostal space bed, and we later converted to a mini thoracotomy (figure 4). The exploration had found several ruptured sub pleural cysts, a pulmonary apex hydatid lesion that was in proximity of another sub pleural hydatid cyst. The latter was in contact with the subclavian artery. We first proceeded with the liberation of the two in act masses. We then performed a pericystectomy of the pulmonary lesion and closed the two bronchial fistulae in its proximity (figure 5). As for the pleural lesion, we performed a partial pericystectomy, keeping intact its base, because it was adhesive to the subclavian artery. After the surgery, albendazole-based medication was administered at a dose of 10mg/kg per day for a period of one year.

3. Discussion

Pancoast tumors produce very characteristic symptoms that are most often related to lung cancer,

but many other diseases can mimic them. Other malignant causes have been sporadically described; such as thyroid cancer, cervical cancer metastases and multiple myeloma. Infectious etiologies such as hydatid cyst, as paraganglioma, staphylococcal or lymphoid granulomatosis have also been reported [2,3]. Despite the high incidence of hydatidosis in some endemic regions such as Morocco, it's exceptional for it to present through symptoms related to brachial plexus compression [4,5].

Literature review showed a few cases of pulmonary hydatidosis mimicking Pancoast tumors, and causing severe osteolysis. Similarities with Pancoast tumors were due either to the compression or invasion of tissue by the growing mass [6,7]. Usually, the surgical procedure for Pancoast tumors invading the subclavian plexus, is the direct anterior minimally invasive Courmier Dateville de Granvold procedure. However, in our case the lesion is in contact with

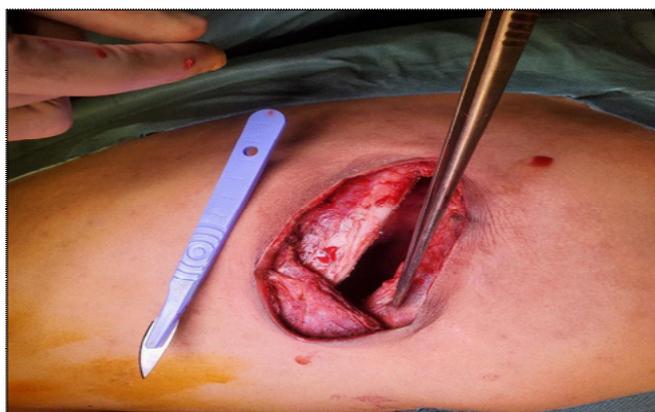


Figure 4. Postero lateral minimally invasive thoracotomy preserving the dorsalis major muscle.

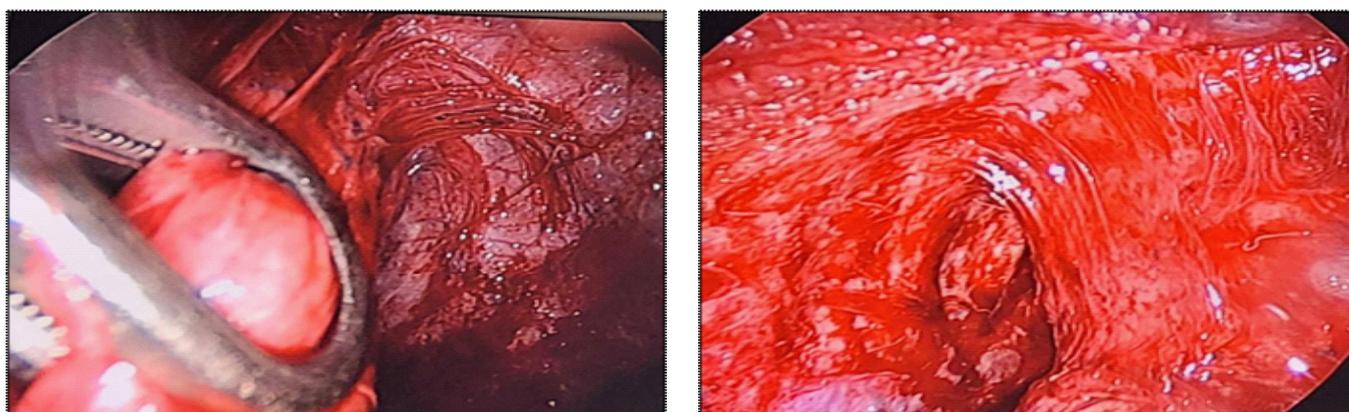


Figure 5. Surgical view showing the release of the two apex lesions

many other sub pleural lesions, as well as with another posterior pulmonary lesion. That's why we opted for a posterior thoracotomy allowing access to all the a forementioned masses. Post operative anti helminthic therapy is largely sufficient for the pericyst that remained in proximity of the sub clavian artery. Posterior mini invasive thoracotomy also allows the advantage of preserving the dorsalis major muscle.

4. Conclusion

Thoracicoutlethydatidcysts should be considered in the differential diagnosis of Pan coast tumors, especially in end emicregions. In such cases, prognosis usually excellent, and a timely resection of the cysts allows full recovery.

5. References

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