

The Solitary Thoracic Schwannoma of the Intercostal Nerve: A Case Operated

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Submitted: 25 Jan 2019; Accepted: 31 Jan 2019; Published: 08 Feb 2019

Abstract

The authors report a case of benign thoracic schwannoma developed from the intercostal nerve in a young adult discover during a random chest pain examination, with the common analgesics having no effect on that. The radiographic image shows a parietal mass on the right side. The Schwannoma's diagnosis must be suspected in front of any subcutaneous tumor of the thorax. The accuracy of the diagnostic is histological. The total resection is the only guarantee of a complete recovery without recurrence.

Keywords: Chest Pain, Isolated Schwannoma, Intercostal, Surgery.

Introduction

A solitary thoracic schwannoma is a benign tumor of nerves, which develops itself from the cells of the Schwann sheath of the intercostal nerves. We report a case of solitary schwannoma of the intercostal nerve with parietal development that looks like a subcutaneous tumor of the thorax.

Observation

D. The 30-year-old male from Serra Leone admits for the management of a deep parietal chest pain at the slightest touch, next to the lateral arc of the 9th rib, not relieved by the usual analgesics associated with a slight hard and firm swelling without vascular character. He had no sign of fever and dyspnea. The pain has been lasting for a year. The clinical examination revealed an anxious patient, stable on the respiratory plan, and then locally, there was an oval swelling of 3cm of diameter, hard, mobile in relation to the deep plane, very painful on palpation. The skin was normal in appearance. Moreover, the general examination did not bring out any other swelling or signs leading towards Recklinghausen disease. The chest X-ray was normal. A thoracic CT scan carried out showed an intercostal thoracic parietal image, right posterior-lateral rib, about 59x30x38mm in length (Figure1) in close contact with the 9th and 10th rib without bone lysis. The remainder of the complementary exam (Heart B-US, biology) was without particularity. He has undergone a postero-lateral thoracotomy passing the 9th right intercostal space. The surgical exploration showed a hard tumor, purplish-looking in hourglass developed at the level of the 9th intercostal in anterior. The appearance of lung, pleura and diaphragm were normal. The surgical act consisted of a costal resection in monoblock, carrying the 9th rib with its neuro-vascular (Figure 2) and then setting up two drainage tubes. The operative follow up were simple. The

anatomy-pathology showed histologically a tumor composed of a proliferation of fusiform structures exhibiting alternation with hemorrhagic patches and large vessels with fibrous wall, tortuous. In places there was a lymphadenitis infiltration and occasionally more irregular nuclei. There was no Mitotic activity Evident and we concluded of a benign solitary thoracic schawannoma. The evolution was favorable with a period of 12months without recurrence

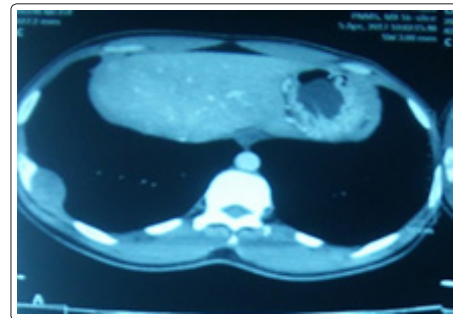


Figure 1: Cross section showing a mass



Figure 2: Piece Per-Operator

Discussion

The majority of primitive thoracic tumors are malignant, only 20% are benign [1]. In the posterior mediastinum, 63% of tumors are neurogenesis, among which benign schwannomas are the most frequent in adults [2,3]. In 5% of cases, they usually develop from the posterior mediastinum intercostal nerves and much more rarely from the vague, phrenic or recurrent nerves [4]. For our patient, the Schwannoma started from the intercostal nerve of the 9th intercostal space in postero-lateral but of small length and unique at the level of the thoracic wall contrary to the literature where development of the schwannoma will not be done in Periphery besides the thoracic cavity [5]. This localization of the schwannoma must be discussed in front of any painful thoracic parietal mass at the slightest touch; however the search for other locations is necessary. Our patient had no other locations, remarkably at the neck, limb's extremities, and the Ponto-cerebellar angle. After an international literature's review, Hiroyuki reported the first case of subcutaneous neuroma of the intercostal nerve; to the best of our knowledge no case was reported. The thoracic CT was very important in these patients because it pointed out the presence of a mass in the intercostal space without affecting the pulmonary parenchyma. However, magnetic resonance imaging (MRI) can guide the diagnosis by showing an aspect in favor of a schwannoma. It can show in T1 a signal of the same intensity or slightly above the muscle, in T2 a hyper-intense signal sometimes a "target image" with a hyper-intense halo peripheral and a hypo-intense center [6]. A diagnosis confirmation remains histological. In terms of therapy, surgery is the treatment of choice for schwannoma. After a full resection in our patient, no recurrence was observed after a one-year follow-up [7]. After a review of the literature, Schwannoma's malignant degeneration was controversial. For isolated schwannoma or even multiple schwannomas, no cases of malignant recurrence have been described at this time [8,9].

Conclusion

The solitary schwannoma of the intercostal nerve with a mode of thoracic development remains rare. The clinical picture is diverse and varied. The diagnosis must be suspected in front of any subcutaneous tumor of the thorax. Diagnostic Certainty is histological. The total resection is the only guarantee of a recovery without recurrence.

References

1. King RM, Pairolero PC, Trastek VF, Piehler JM, Payne WS, et al. (1986) Primary chest wall tumors: factors affecting survival. *Ann Thorac Surg* 41:597-601.
2. Grenier P (1996) Tumors of the pleura AND mediastinal pathology. In: *Thoracic imaging of the adult*. Paris Flammarion Medicine Science.
3. S nac JP, Giron J (1986) Neurogenic tumors of the mediastinum in adults. In: *Thoracic computed tomography*. Paris Axon.
4. Stefanidis C, El Nakadi I, Huynh CH, De Francquen P, Van Gossuin A (1994) Benign thoracic schwannoma and post-operative chylothorax. *Acta Chir Belg* 94: 105-109.
5. Sakurai H, Hada M, Mitsui T, Ashizawa I (2006) Extrathoracic neurilemoma of the lateral chest wall mimicking a subcutaneous tumor: report of a case. *Ann Thorac Cardiovasc Surg* 12:133-136.
6. Amal Ankouz I, Abdellatif Louchi I, Khalid Ait Taleb (2014) The solitary extra thoracic schwannoma of the intercostal nerve: Rare pamj localization.
7. Sharon Weiss W, Goldblum JR (2001) *Enzinger and Weiss's soft tissue tumor*. 4th edition United States. St Louis. Mosby.
8. Ducatman B, Scheithauer BW, Piepgras DG, Reiman HM, Ilstrup DM (1986) Malignant peripheral nerve sheath tumors: a clinic pathologic study of 120 cases. *Cancer* 57:2006-2021.
9. Bhargava R, Parham DM, Laster OE, Chari RS, Chen G, et al. (1997) MR imaging differentiation of benign and malignant peripheral nerve sheath tumors: use of target sign. *Pediatr Radiol* 27:124-129.

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