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Case Report

Excision of a mediastinal tumor process associated with simultaneous treatment of isthmic coarctation of the aorta: About a case

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ABSTRACT:
Isthmic coarctation of the thoracic aorta associated with an ipsilateral mediastinal tumor process is the only case that we have encountered in our experience and no similar case has been reported in the international literature. We report the clinical case of a 6-year-old child presenting severe hypertension associated with a pathological image on the telethorax. CT-guided biopsy of the process revealed a hemolymphangioma associated with CT angiography of an isthmic coarctation of the aorta. The child underwent a successful single-stage operation and benefited from complete excision of the mass with treatment of the coarctation of the aorta. The interest of the case is to underline the congenital nature of the two conditions, independent of each other, and the possibility of treatment in a single stage. This observation shows that we can sometimes treat two different conditions in the same surgical procedure, with a single approach, but taking into account compatibility in the field of asepsis. It is also a plea to broaden the training of thoracic surgeons who must also acquire skills in the vascular field.

Keywords: Mediastinal tumor; Hemolynphangioma; coactation of the Aorta; child; surgery; single stage.

INTRODUCTION

Isthmic coarctation of the thoracic aorta associated with an ipsilateral mediastinal tumor process is the only case we have encountered in our experience and no similar case has been reported in the international literature. We report this clinical case of a 6-year-old child presenting severe hypertension associated with a pathological image on the telethorax. CT -guided biopsy of the process revealed a hemolymphangioma. The child underwent a successful single-stage operation. The interest of the case is to underline the congenital nature of the two conditions independent of each other and the possibility of treatment in a single stage.

CASE PRESENTATION:

Child aged 6 years presenting severe hypertension linked to isthmic coarctation of the aorta associated with a tumor of the anterior mediastinum. The diagnosis of coarctation is established on the following elements: Abolition of femoral pulses. ; Severe hypertension resistant to medical treatment and confirmed by Ultrasound and Angio-scanner . (Fig 2).

The diagnosis of the mediastinal process is established on standard radiological examinations, namely a telethorax (face and profile) which showed a homogeneous opacity occupying the left part of the antero-superior mediastinum. (Fig 1). The CT- guided biopsy came back in favor of a cavernous hemangioma.

Decision to operate on the patient and treat both pathologies at the same time. The initial approach was a classic posterolateral thoracotomy in the 4th left intercostal space. (Fig 3).

The assessment of the lesions at the opening of the thorax confirms the isthmic nature of the coarctation associated with a large, well-encapsulated mediastinal tumor without pulmonary parenchymal involvement (Fig 3). We proceed to excision of the tumor first (Fig 4). then cure of the coarctation according to the CRAWFORD method by Resection of the stenotic area and direct end -to-end suture. (Fig 5).

The surgical outcomes were very favorable and the patient left the hospital on the 21st postoperative day after removal of the chest tube on the 3rd day with progressive reduction in BP, until its normalization on the 15th postoperative day. Control telethorax without

abnormality on post-operative day 6 (Fig 6) with disappearance of the trans-anastomotic gradient on the control Doppler ultrasound at 03 months and 06 months postoperatively without abnormalities. The anatomopathological results corrected the initial diagnosis of the tumor by concluding that it was a Hemolymphangioma . (Fig 7-8).

Fig 1: Appearance CT scan of the left endothoracic mediastinal mass. (K..MESKOURI collection)

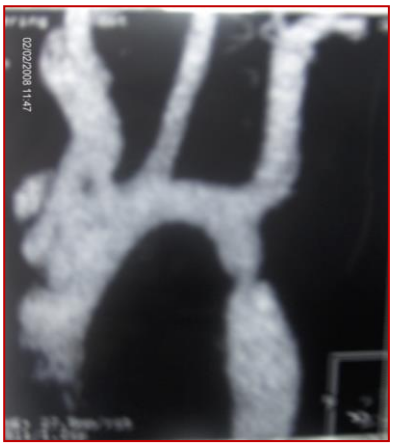

Fig2: Isthmic coarctation of the aorta (CT angio):. (K..MESKOURI collection)

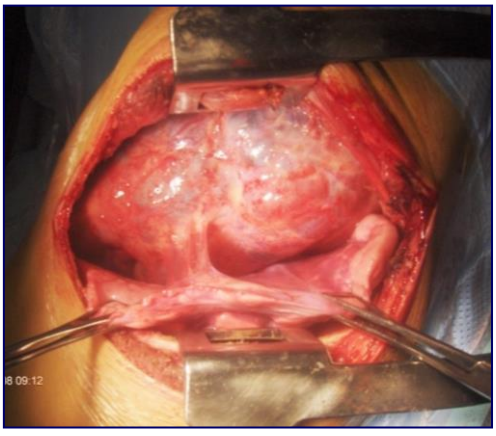

Figure 3: Mediastinal mass before surgical excision. (K..MESKOURI collection)

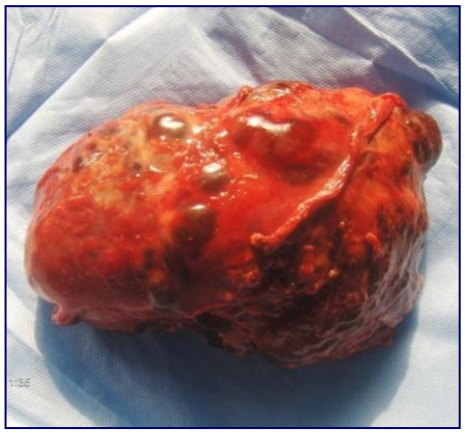

Figure 4: Macroscopic appearance after complete excision of the mass. (K..MESKOURI collection)

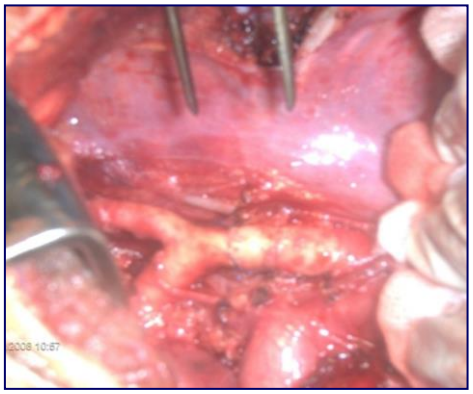

Figure 5: End -to-end suture of the aorta. After resection of the coarctation. .(K. .MESKOURI collection)

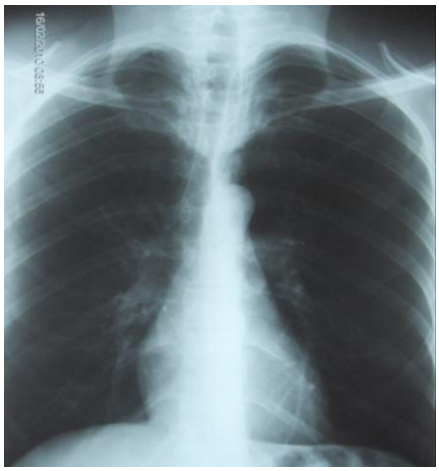

Figure 6: Control thelethorax on post-operative day 6. (K..MESKOURI collection)

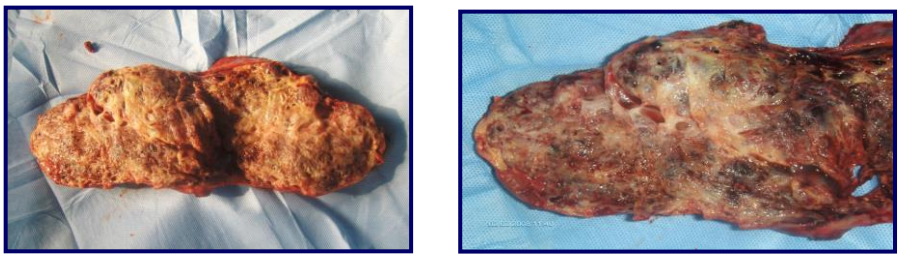

Figure 7: Macroscopic appearance of hemolymphangioma . (K..MESKOURI collection)

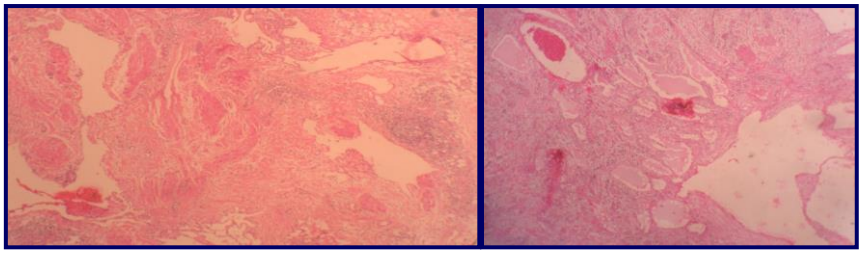

Fig8: Microscopic appearance of hemolymphangioma . (K.MESKOURI collection)

DISCUSSION:

hemolymphangioma is a tumor whose origin varies depending on age [1], [2], [3]. It is characterized by the presence of anastomotic vascular cavities whose lumen is empty and whose walls are thin, covered with a thin endothelium with muscular bundles at the periphery and lymphoid islets. The cysts can be of variable size and the hemangiomatous contingent more or less important. This tumor tissue very often includes nervous structures. [1], [2], Hemolymphangioma is a rare and benign tumor resulting from the abnormal development of lymphatic vessels. Cervical forms are the most common. [4], Exclusive mediastinal locations are relatively rare in children and of very variable clinical expression. Most often the mass is asymptomatic. But it can be revealed by dysphagia, dyspnea or chest pain. Medical imaging makes it possible to make a positive diagnosis of the mass but the diagnosis of nature is provided by histology. Surgery remains the treatment of choice. [5], [6],

Coarctation of the aorta is a localized narrowing of the aortic lumen which leads to hypertension in the upper limbs, hypertrophy of the left ventricle, if severe, and poor vascularization of the abdominal organs and lower limbs. Symptoms vary depending on the severity of the abnormality and range from headache, chest pain, cold extremities, asthenia, claudication of the lower limbs, to fulminant heart failure and shock. A soft vascular murmur can be heard above the coarctation site [7]. Diagnosis is based on echocardiography, CT angiography or MRI angiography. Treatment will be by percutaneous transluminal balloon angioplasty with stent placement or by surgical treatment. [8], [9],

The authors found no similar case in the literature consisting of the association of a mediastinal tumor and coarctation of the isthmus of the aorta.

CONCLUSION:

Mediastinal cystic hemolymphangioma is a rare tumor. Its mode of clinical revelation may be imposing for other pathologies. However, we must always remember that this can be a revealing sign of an underlying condition that is sometimes much more serious, such as heart disease, a tracheobronchial malformation or extrinsic compression of the lower airways. Think it. This observation shows that we can sometimes treat two different conditions in the same operating time, with a single approach, but taking into account compatibility in the field of asepsis.

It is also a plea to broaden the training of thoracic surgeons who must also acquire skills in the vascular field.

Conflict of Interest: The authors declare no conflict of interest.

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