

## Case report

### Cystic lymphangioma of the adrenal gland : Case Report

#### Abstract :

Cystic lymphangioma of the adrenal gland is a rare benign tumor. It is generally asymptomatic and its finding is most of the time unexpected.

Its diagnosis can be guided by imaging, in particular by echography and tomography.

The diagnostic certainty is obtained by anatomopathological examination of the operative specimen.

The treatment of choice is surgery, with a total ablation of the lesion. Their prognosis is excellent, however recurrences can be seen in case of incomplete resection of the cyst. Which requires regular monitoring in these patients.

We report a case of a patient with cystic lymphangioma who was treated with surgical resection.

**Keywords:** Cystic lymphangioma, adrenal gland, cystic tumor

#### 1. Introduction :

Cystic lymphangioma is a rare benign malformative tumor of the lymphatic vessels with various locations, encountered in both adults and children. The lymphangioma was first described by Redenbacher [1] in 1828, but its connection to the lymphatic system was established half a century later by Koester [2]. Its origin remains a subject of debate; however, the congenital malformative theory is currently the most accepted.

Typically, the lesion is singular. When the involvement is multifocal, it is referred to as lymphangiomatosis. Cystic lymphangiomas can be found in any anatomical site with lymphatic circulation, but they most commonly occur in the cervical and axillary regions.

Adrenal cystic lymphangiomas are rare benign tumor formations known since the late 17th century. Greiseliuss made the first description during an autopsy for massive cystic hemorrhage. The largest series was published by Abeshouse et al. [3] in 1959, which included 155 cases, 57% of which were rediscovered during autopsies [4]. Adrenal cystic lesions are rare, with an incidence of approximately 0.06% in the general population. Adrenal cysts are classified as endothelial cysts, pseudocysts, epithelial cysts, and parasitic cysts. Endothelial cysts (20% to 32% of all adrenal cysts) are further subdivided into lymphangiomatous and angiomatous subgroups. [5]

Adrenal cystic lymphangiomas are often asymptomatic and are difficult to diagnose preoperatively. Ultrasound and CT scans play a significant role in the exploration of these tumors. Diagnosis relies on histology. Surgical exploration is often indicated in cases of diagnostic uncertainty. The treatment of choice is surgical.

We report a case of an adrenal cystic lymphangioma with a review of the literature.

#### 2. Case presentation :

A 55-year-old patient, with no medical history, was admitted for the management of an abdominal mass.

The abdominal examination revealed a mobile, palpable, painless mass in the right hypochondrium with a cystic appearance and well-defined edges. The rest of the physical examination was unremarkable.

Abdominal ultrasound showed a large multicystic mass with a thickened wall and a honeycomb appearance, suggesting a hydatid cyst of the liver, classified as stage III according to GHARBI's classification.

A CT scan of the abdomen and pelvis revealed a large cystic mass measuring 180 x 140 mm, displacing the right hemidiaphragm and pushing the right kidney downward, consistent with either a hydatid cyst of the liver or a cystic liver tumor (Figure 1).

Abdominal MRI confirmed the diagnosis of a multicystic mass of the right adrenal gland (Figure 2).

The patient was operated on via a right subcostal approach with complete excision of the right adrenal cystic mass (Figures 3 and 4).

The pathological report favored a cystic lymphangioma of the adrenal gland.

Postoperative recovery was uncomplicated, with good clinical and radiological progress. Two years later, there was no sign of recurrence.

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Figure 1: Abdominal scan showing a large right adrenal mass displacing the right kidney downward.



Figure 2 : Abdominal MRI showing a large multilocular cystic mass in the right adrenal gland.



Figure 3 : Operative view showing the right adrenal cystic mass.



Figure 4 : Image showing the adrenal mass after opening the the operative specimen

### 3. Discussion :

Cystic lymphangiomas are rare benign tumors. Their incidence is estimated at 1 in 100,000 hospitalizations [6]. They typically occur near lymphatic regions, such as the cervical and axillary areas (95%) [7]. The remaining 5% are found in the abdominal, mediastinal, or thoracic cavities [7]. Cystic adrenal lymphangiomas account for 45% of benign cystic adrenal tumors according to Ghandur-Mnayney [8]. Adrenal cystic lesions are rare, with an incidence of about 0.06% in the general population [9]. The onset of symptoms usually occurs between the ages of 30 and 50, with peak incidence in the fourth decade of life [10].

Regarding etiology and pathogenesis, a congenital origin is currently considered the most likely by most authors. Cystic adrenal lymphangiomas are generally asymptomatic and discovered incidentally, as in the case of our patient. Observed functional signs are non-specific.

Computed tomography (CT) is an excellent initial diagnostic tool in adults. It confirms the mass syndrome, localization, size, and relationships with neighboring organs. It has the advantage of differentiating between fluid-filled and solid tumors. There is no enhancement after contrast injection. On CT, the cystic adrenal lymphangioma is identified as a homogeneous hypodense lesion, non-enhancing, with smooth borders and a thin wall (<3.5 mm) [11].

Magnetic resonance imaging (MRI), as a secondary approach, allows for better delineation of the cyst's relationships and content. On MRI, cystic adrenal lymphangiomas are generally homogeneous, with low signal intensity on T1-weighted images and high signal intensity on T2-weighted images, without internal enhancement. MRI is more sensitive for detecting intracystic hemorrhages and complicated cysts, which show high signal intensity on both T1 and T2-weighted images [11].

Surgical treatment is the preferred approach, consisting of complete resection of the lesion, especially for masses larger than 5 cm. Adrenalectomy can be performed via laparotomy or laparoscopy [12]. For our patient, who had an 18 cm adrenal mass, adrenalectomy was performed via laparotomy.

The prognosis for abdominal cystic lymphangioma is excellent when resection is complete. Recurrence is the main complication if the resection is partial. Some authors have reported a recurrence rate ranging from 10 to 15% (9.5% in the STEYAERT series) in cases of incomplete cyst resection, which necessitates regular ultrasound monitoring for these patients. In our case, with a two-year follow-up, there has been no recurrence.

#### 4. Conclusion :

Cystic lymphangioma of the adrenal gland is a rare benign tumor. It is usually asymptomatic, and its discovery is most often incidental. Diagnosis can be suggested by imaging, particularly ultrasound and computed tomography (CT). Definitive diagnosis is achieved through pathological examination of the surgical specimen.

Complications can occur, including intracystic hemorrhage, infection, and cyst rupture, although malignant transformation is rare. The preferred treatment is surgical, involving complete excision of the lesion. With the advent of laparoscopy and mastery of its techniques, resection of this cyst using this method may be more beneficial.

The prognosis excellent; however, recurrences can occur in cases of incomplete cystresection, necessitating regular monitoring of these patients.

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