


Case Reports


RETROPERITONEAL CYSTIC MATURE TERATOMA AS THE PRESENTING CLINICAL SCENARIO OF TESTICULAR CARCINOMA. RADIOLOGICAL STUDY

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Summary.- OBJECTIVE: To describe a case of retroperitoneal mature teratoma presenting as metastasis of a testicular mixed germ cell tumor in a thirty year old man who had lumbar and abdominal pain and mass sensation in the left hemiabdomen.

METHODS: Abdominal ultrasound and thoracic-abdominal-pelvic CT multidetector scan were performed, and then after a Doppler ultrasound study of the testicles. Surgical treatment was performed: orchiectomy and retroperitoneal lesion resection.

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RESULTADOS: Las pruebas de imagen mostraron una gran lesión quística en el espacio retroperitoneal izquierdo, de 13 x 12 x 11 cm, bien definida, con finos septos, desplazando el riñón, y una lesión testicular sólida-quística de 4 cm, multiseptada, con polos sólidos y flujos vasculares de baja resistencia. El estudio de extensión torácica no mostró hallazgos. Los resultados histopatológicos de los fragmentos de orquiectomía y la lesión retroperitoneal fueron, respectivamente, tumor mixto de células germinales (seminoma, con focos de seminoma intratubular y teratoma) y teratoma quístico maduro.

CONCLUSIONES: Debido a que los tumores de células germinales derivan de células multipotenciales con gran capacidad de diferenciación y que las cadenas ganglionares paraaórticas constituyen una vía de diseminación natural de estas neoplasias, la presencia de una lesión retroperitoneal en un paciente joven obliga a descartar metástasis de tumor testicular. El teratoma quístico maduro retroperitoneal debe considerarse una lesión con potencial maligno.

**Palabras clave:** Teratoma. Testículo. Retroperitoneo. Tumor mixto de células germinales. Ecografía.
The mixed germ cells tumor (first or second according to the series, 33-60%), is usually found as complex masses with different histological strains. The combination of teratoma and embryonic carcinoma (teratocarcinoma, 26%) is the most frequent inside this group of neoplasms, and the combination of seminoma and teratoma (like our case) is only 6%. Usually, it affects young patients with an average age of 30 years old (1, 2).

The most frequent form of clinical presentation is as a painless scrotal mass and less frequent as a scrotal or lower abdomen heaviness sensation. The pain is only present in 10% of cases (1). A 2.5% of cases have the symptoms of the metastases as the first manifestation, and the most frequent of them are: abdominal/lumbar pain because of retroperitoneal metastases, and less frequent: gastrointestinal bleeding, bone pain, dyspnea, cough, neurological symptoms, supraclavicular mass, lower legs edema, paraneoplastic symptoms (exophthalmos, hypercalcemia), etc. In hormonally active tumors may have endocrine symptoms as gynecomastia (3, 4).

To understand the etiopathogenesis of this case is necessary to know the natural history and the dissemination ways of these tumors as well as its embryogenic origin.

Mainly germ cells tumors may have lymphatic (seminoma) or hematogenous dissemination (coriocarcinoma). The right testicle affects nodes placed in the interaorto-

FIGURE 1. CT scan. Cystic retroperitoneal lesion with thin septa.

FIGURE 2. Testicular doppler ultrasound. Solid-cystic mass, with vascular flows in the walls and solid poles.
caval chain. The left testicle affects left paraaortics nodes, in the area of renal vein, aorta, ureter and inferior mesenteric artery. The hematogenous metastases are placed, in order of frequency: lung, liver, brain and bone (1).

Following the basic model of differentiation of germ cells tumors set by the work team of “MD Anderson Cancer Center”, these lesions have a common precursor or “intratubular germ cell neoplasia”, from which the seminoma derives. More dedifferentiation leads to the embryonic carcinoma as an intermediate level. The other three tumoral types (mature teratoma, choriocarcinoma and endodermal sinus tumor) may originate from the embryonic carcinoma or from the seminoma (Table I).

The basic model helps to understand the potentiality of these germ cells to become one or another histologic line. The most significant cases of this phenomenon of tumoral differentiation are the “testicular mature teratoma which metastatize as mature teratoma” and the “Growing teratoma syndrom” after chemotherapy.

In our case, a testicular lesion, aggressive in imaging findings and not clinically appreciated, led to a left retroperitoneal metastasis which differentiated to mature teratoma, and the mature teratoma has a benign radiological appearance.

In this sense, the postpubertal retroperitoneal teratoma have malignant potential, and vascular invasion has been described in these patients (1, 3-6).

Testicular ultrasound detects testicular mass with a sensibility close to 100%, and can differentiate the intra or extratesticular affection with a sensibility of 98-100% (1), and there are ultrasound findings which let to the diagnosis of seminomatous or not seminomatous tumors. Seminoma appears as homogeneous hypoechoic mass well defined. Non seminomatous tumors like teratocarcinoma, appears as heterogeneous mass with irregular borders (with cystic spaces or calcifications because of necrosis). Teratoma has calcifications and well defined cystic spaces. Choriocarcinoma appears as a heterogeneous mass, not very large, with focus of calcifications and necrosis areas. With these findings, the ultrasound differentiation between seminomatous and non seminomatous tumors have been done. The differential diagnosis of retroperitoneal cystic mass, as our case (with thin septa), is large and nonspecific (Table II), because of that we only mention the ultrasound role for the evaluation of structure and vascular pattern, and the CT or MR to set the organ which proceed the mass. The diagnosis of teratoma is suggest if appears fat, teeth or calcifications (2, 7, 8).

The treatment of testicular tumors, the inguinal radical orchiectomy is the first therapeutic procedure to perform because, in addition to controlling local disease,
TABLE I. MODELO BÁSICO DE DIFERENCIACIÓN DE TUMORES DE CÉLULAS GERMINALES.

<table>
<thead>
<tr>
<th>Neoplastic</th>
<th>Nonneoplastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cystic lymphangioma</td>
<td>Pancreatic pseudocyst</td>
</tr>
<tr>
<td>Mucinous cystadenoma</td>
<td>Nonpancreatic pseudocyst</td>
</tr>
<tr>
<td>Cystic teratoma</td>
<td>Lymphocele</td>
</tr>
<tr>
<td>Müllerian cyst</td>
<td>Urinoma</td>
</tr>
<tr>
<td>Cystic mesothelioma</td>
<td>Hematoma</td>
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</tbody>
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TABLE II. DIFFERENTIAL DIAGNOSIS OF RETROPERITONEAL CYSTIC MASS (from Radiographics 2004).

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**Neoplastic**
- Cystic lymphangioma
- Mucinous cystadenoma
- Cystic teratoma
- Müllerian cyst
- Cystic mesothelioma
- Epidermoid cyst
- Tailgut cyst
- Bronchogenic cyst
- Cystic change in solid neoplasm
- Pseudomyxoma retroperitonei
- Perianal mucinous carcinoma

**Nonneoplastic**
- Pancreatic pseudocyst
- Nonpancreatic pseudocyst
- Lymphocele
- Urinoma
- Hematoma

allows the pathological diagnosis, staging T and if there is lymphatic invasion or vascular tumor mass. For seminoma tumors, radiotherapy after orchiectomy is the treatment of choice in most centers when it comes to non-advanced stages. If not, and it is a case of advanced disease, the cisplatin-based chemotherapy is used.

In nonseminomatous tumors with low stages could be used after orchiectomy: dissection of the retroperitoneal lymph nodes (DGLPR) or adjuvant chemotherapy, but in cases of advanced disease is preferred chemotherapy (4, 5, 6, 8).

**CONCLUSIONS**

The presence of a retroperitoneal cystic lesion with radiologic findings of benignity in a postpubertal patient should suggest teratoma as metastases of a germ cells tumor, and a testicular study must be done. The knowledge of the dissemination ways and the tumoral embryology are fundamental to have a correct diagnosis. Even if the retroperitoneal teratoma have a mature histology, a neoplasm with malignant potential may be considered.
REFERENCES AND RECOMMENDED READINGS
(*of special interest, **of outstanding interest)


VAGINAL METÁSTASIS OF A CLEAR RENAL CELL CARCINOMA

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Summary.- OBJECTIVE: Remember that kidney cancer is a disease whose incidence is increasing due to increased use of additional imaging tests, which is changing the way of diagnosis, making the classic clinical syndrome synonymous with advanced illness.

METHODS: We report the case of a patient with a right renal tumor with renal vein involvement that in the natural course of the disease showed a vaginal metastasis of clear renal cell carcinoma, which was treated with surgical excision.

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