Background

Schwannoma (Sch) is a rare peripheral nerve sheath tumor comprised entirely of neoplastic Schwann cells. Adrenal Sch are extremely rare. Most adrenal Sch are incidental, and patients with Sch may not have any complaints.

Clinical case

Step 1. Urologist

Woman, 58 y.o., Complaint: painless macrohematuria

MRI was performed: giant mass (14x13x11cm) with cystic degeneration and calcification, which was located in retroperitoneum

Step 2. Endocrinologist

Hormonal examination according to current protocols

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Plasma cortisol after 1-mg DST</td>
<td>&lt; 50 nmol/l</td>
</tr>
<tr>
<td>Urinary fractionated metanephrines (M)</td>
<td>59 mcg/24-hour</td>
</tr>
<tr>
<td>Urinary fractionated normetanephrines (NM)</td>
<td>144 mcg/24-hour</td>
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Step 3. Urologist

Preliminary diagnosis - adrenocortical carcinoma because of the size of the tumor, heterogeneous structure, absence of known cancer in anamnesis.

Right laparotomic adrenalectomy was performed without any intraoperative and postoperative complications.

Step 4. Results

Immunohistochemical assay showed that tumor cells were positive for S-100 protein and vimentin, which was consistent with schwannoma.

Genetic testing didn’t revealed any associated mutations of schwannomatosis or neurofibromatosis type 2.

Conclusions

1. Because of rarity of adrenal Sch, it is of great importance to describe any case in order to understand true prevalence and natural history of the disease.

2. Sch as may be discovered incidental, as may be non-specific symptomatic.

3. Preoperative diagnosis of Sch is impossible in most cases, that's why strict following to diagnostic protocols is demanded in order to exclude all other causes of incidentalomas firstly.