Glandular lesions and tumors in uropathology. Case of the kidney tumor.

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36-year-old female

Accidentally was found kidney tumor

There were no symptoms of hematuria, flank, pain, irritable urinary symptoms

Physical examination:
- Intrarenal solitary tumor, 2.5 cm, mid-pole of the right kidney
- Well circumscribed
The patient underwent right partial nephrectomy in under the clinical diagnosis of RCC.

Macroscopy:
- Solid soft tumor
- Well-circumscribed mass 2,5x2,5x2,3cm
- White-red cut surface
Microscopy
Is it thyroid-like follicular carcinoma?
Thyroid-like follicular carcinoma of the kidney (TLFC) is a rare type of RCC that has not been included in this classification (2016).

TLFC is an unusual histological type of renal cell carcinoma, which is morphologically similar with follicular carcinoma of the thyroid, but is characteristically negative for thyroid immunohistochemical markers.

First described in 1996, only 23 cases have since been described.

Thyroid-like follicular RCC are usually detected in middle-aged patients (mean: 44 years; range, 19–83 years), with 11 women and 9 men affected.

The primary tumor sizes range from 1.9 to 11.8 cm with a tan color and are solitary in all cases to date.
Most thyroid-like follicular RCC followed an indolent course with metastatic disease observed in four patients.

This rare variant of RCC has a low, but distinct, malignant potential and can be clinically aggressive.
Second component
Second component

- Spindle cell
- Lipomatous islands
- Pleomorphism
- Sarcomatoid component?
Mitosis are absent
The tumor consists of two components:

- Epithelial (MCK+, vim -/+ , CK7+, CD10-, PAX8+),
- Stromal (MCK-, vim+, SMA-, desmin-, CD10+, ER-, focal PR+)

- Negative: RCC, AMACR, HMB-45, Tg, TTF-1, inhibin-α
MEST (Mixed Epithelial and Stromal Tumor)

- It was first described by Michal M and Syruecek M in 1998.
- WHO classification, 2004
- Mixed epithelial and stromal tumor family.
  - Adult cystic nephroma
  - Mixed epithelial and stromal tumor
Names before

- Congenital mesoblastic nephroma
- Leiomyomatosis renal hamartoma
- Solid and cystic biphasic tumor
- Cystic hamartoma
- Solitary multilocular cyst
- Adult metanephric stromal tumor
MEST

- Perimenopausal women
- Young female and male – rare cases
- Most of this tumors are benign
Mixed epithelial and stromal tumor. Adult cystic nephroma
Microscopy

- Variably sized cysts and glands separated by stroma.
- Epithelial component consists mostly of medium-sized cysts and glands/tubules and less commonly of small or very large cysts or glands with phyllodes-type architecture.
- They are lined by flat to cuboidal, hobnail or columnar cells.
Stromal component

- Stroma ranges from hypocellular and collagenous to cellular.
- Smooth muscle metaplasia is common
- Lipomatous metaplasia is less common
- Ovarian-type stroma is often present and may undergo secondary luteinization.
- Actin+, desmin+, CD10+, ER+, PR+
Malignant transformation

- Stromal sarcoma
- Carcinosarcoma
- Rhabdomyosarcoma
- Chondrosarcoma
- Undifferentiated sarcoma

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Case Report
Malignant mixed epithelial and stromal tumor of the kidney: the second male case and review of literature

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Malignant mixed epithelial and stromal tumour of the kidney: a case report and a literature review

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Introduction. Mixed epithelial and stromal tumour of the kidney
Histologically, the mass consisted of variably sized cystic spaces with collarets of fibromuscular and hypercellular stroma resembling ovarian-type stroma.

“In this background, there was a distinct, well-circumscribed, and partially encapsulated mass of thyroid-like tissue with prominent follicular architecture.”
- No smooth muscle metaplasia
- No ovarian-type stroma
- Lipomatous metaplasia is present
- Focal PR+, CD10+
What is this tumor?

- Thyroid-like follicular carcinoma with stromal component?
- MEST with thyroid-like follicular carcinoma?
- MEST?
- Benign or malignant?
3 months later…

- Her father (60-year-old) underwent a partial nephrectomy
- Tumor 2,5x2x2 cm
- pRCC (CK7+, AMACR+, CD10+)

- Now we performe genetical analysis for both cases.
Thank you!

Central Clinical Hospital of the Office of the President