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Caso aislado

Metanephric adenoma: Report of a case with perinephric fat pseudoinfiltration

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RESUMEN

El adenoma metanéfrico es un tumor infrecuente sin potencial maligno que a menudo se confunde con un carcinoma de células renales o un tumor de Wilms epitelial. Son tumores circunscritos, con un tamaño medio de 5 cm. Frecuentemente muestran calcificación, áreas quísticas, hemorragia y necrosis. Microscópicamente están constituidos por pequeños ácinos separados por un estroma acelular, pudiendo presentar también estructuras tubulares, glomeruloides y papilares. Las células tumorales tienen escaso citoplasma y núcleos pequeños, redondos e irregulares. Presentamos el caso de una mujer de 59 años con un tumor renal derecho que se diagnosticó de adenoma metanéfrico; como rasgo distintivo presentaba infiltración del tejido adiposo perirrenal por numerosos grupos de células tumorales con cuerpos de psammoma, hecho éste no descrito anteriormente en la literatura. **Rev Esp Patol 2001; 34(1): 33-36.**

Palabras clave: Adenoma metanéfrico

SUMMARY

Metanephric adenoma is a rare renal neoplasm with no malignant potential and is often misinterpreted as renal cell carcinoma or epithelial Wilms' tumor. These tumors are well circumscribed with a mean size of 5 cm. Calcifications, cystic areas, hemorrhage and necrosis are common. Microscopically, these neoplasms consist of very small acini separated by an acellular stroma and, less frequently, tubular, glomeruloid and papillary formations. The tumor cells have scant cytoplasm and small, round and regular nuclei. We describe the case of a 59-year-old woman with a right kidney neoplasm presenting features considered to be those of a metanephric adenoma. The perinephric adipose tissue, however, showed infiltration of numerous clusters of tumor cells with psammoma bodies. To our knowledge, this feature has not been previously reported in MA. **Rev Esp Patol 2001; 34(1): 33-36.**

Key words: Metanephric adenoma

CASE REPORT

The patient was a 59-year-old female, whose renal tumor was detected incidentally during an abdominal ultrasound examination for suspected gall-bladder calculus disease.

The renal ultrasound and the computed tomography (CT) scan revealed a solid mass in her right kidney. The

findings suggested a complicated renal cyst or carcinoma. No retroperitoneal lymph node metastases were observed. The renal and cava veins were free of thrombosis. The patient underwent a right radical nephrectomy.

On macroscopic examination the tumor measured 2.5×2.5×2.6 cm, was located in the right cortex, was well circumscribed and demarcated from the adjacent renal parenchyma, with no capsule, and was pushing into adipose tissue. The cut surface of the lesion was papillary with cystic areas and a light tan color with yellow focal areas (Fig. 1).

Histologically the tumor was composed of uniformly small epithelial cells, with scant cytoplasm and round and regular nuclei. The tumor cells formed very small acini in an acellular stroma and papillary formations (Fig. 2). These structures were frequently calcified with formation of psammoma bodies (Fig. 3).

The most surprising feature was the presence of small clusters of tumor cells with psammoma bodies infiltrating the adjacent fat, but not the renal parenchyma (Fig. 4).

The tumor cells showed positive for keratin, S-100, and occasionally for vimentine and for epithelial membrane antigen.

DISCUSSION

Metanephric adenoma of the kidney is a newly recognized entity of renal adenoma and shows characteristic histological features. Immunohistochemical and electron microscopic results are not critical to the diagnosis (1).

The suggestion has been made that these tumors represent the mature or differentiated counterpart of Wilms' tumor (2); the differential diagnosis between them is based on the absence of mitotic activity and hyperchromasia of the adenoma (1).

Figure 1. Well circumscribed tumor with no capsule. Papillary and cystic areas.

Figure 2. Small acini and papillary pattern in an acellular stroma.

Figure 3. Acellular stroma and calcifications.

The distinction between metanephric adenoma and renal carcinoma is based on the histological aspects: small and cuboidal cells with scant cytoplasm arranged in an interconnected tubular or papillary pattern, and with an acellular stroma with segregation of the tubules, or acini, into isolated units. Epithelial membrane antigen is almost always negative.

The histological differential diagnosis for this tumor also includes the sclerosing of metanephric hamartoma, while the epithelial and stromal elements of the two

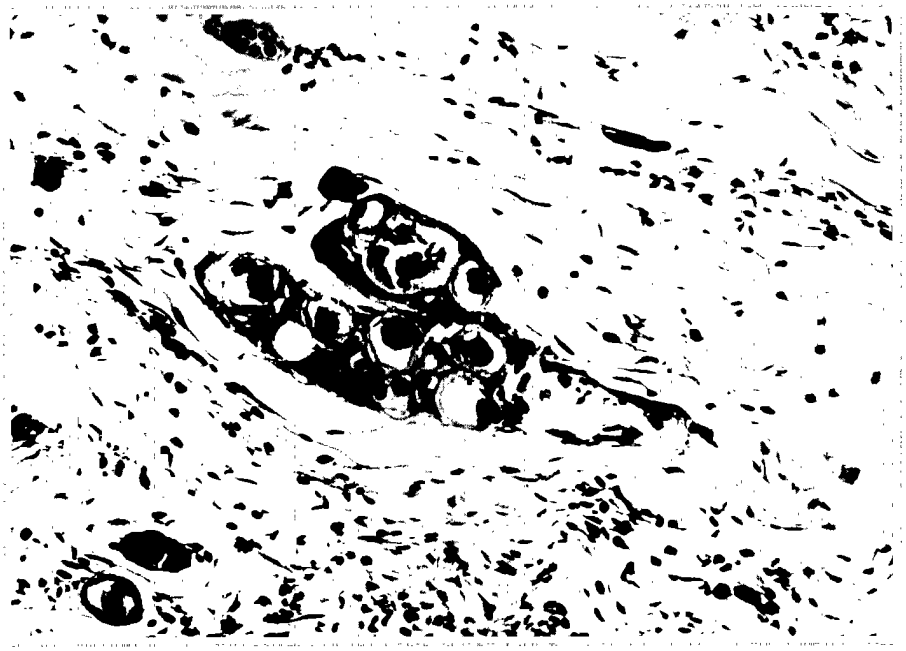

Figure 4. Small clusters of tumor cells with calcospherites infiltrating perinephric fat.

lesions are similar. Hamartoma, however, would be found in the context of nephroblastomatosis.

Metanephric adenoma appear to be benign tumors with no malignant potential (1, 3). Clinical follow-up has revealed no evidence of local recurrence or metastatic tumor. This lack of recurrence may be due to complete removal of the tumor by nephrectomy, to the lack of aneuploid cells, or to the fact that all the tumors reported were sharply circumscribed tumors, with or without capsule, and without invasion of the perirenal fat.

The metanephric adenoma reported here differs in some respect with those previously cited in the literature. The hallmark of the case is the presence of neoplastic cells associated with calcospherites in the perirenal fat adjacent to the border of the tumor. These tumor foci are interpreted as undeveloped and regressive tumor cell nests and probably not as viable infiltrative growth. The prognosis is that of a benign tumor growth, as should correspond to an metanephric adenoma. At the present time, 3 years after surgery, the patient is well, with no tumor recurrence.

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