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A Rare Case of Urachal Teratoma

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ABSTRACT

The urachus is an embryonic relic, connecting allontois to the bladder, along the foetal life. Its anomalies are not exceptional; they are the expression of its incomplete regression. The diagnosis of urachus pathologies is rarely evoked on clinical elements, but rather by imaging techniques. We report the case of an urachal teratoma revealed by abdominal pain and recurrent urinary infection and confirmed by CT-scan.

KEYWORDS: urachal remnants; CT-scan; urachal teratoma.

INTRODUCTION

The urachus, or median umbilical ligament, is a fibrous residu of cloaca and the allontois that sits back of abdominal wall between the transversalis fascia and peritoneum, connecting the bladder to the umbilicus all along the foetal period before that it involutes [1]. However, its persistence can generate multiple issues, which are most often seen in children, occasionally in adults. The clinical presentation can mimic numerous abdominal and pelvic diseases. The diagnosis is based on imaging modalities such as abdominal-pelvic sonography, Ct-scan, fistulography and MRI.

This article sheeds the light on a patient case with abdominal ct-scan showing urachal teratoma, with review of literature [2;3].

CASE REPORT

The responsible service received a 48 years old Moroccan man, with no significant past medical or chirurgical history. This patient was investigated for recurrent lower urinary tract infection and abdominal pain more marked in the left lumbar area. He was referred to our service to characterize a left renal mass that was suspected of malignity in ultrasonography that made by a generalist sonographer. A CT-scan was performed, showing -except the suspected renal tumour- a sharply defined heterogeneous mass, with thick wall, few areas of calcification and hypodense elements with low density, corresponding of fat composant. This mass was anterior, extraperitoneal, situated just beneath the umbilicus in the midline (Figure 1).

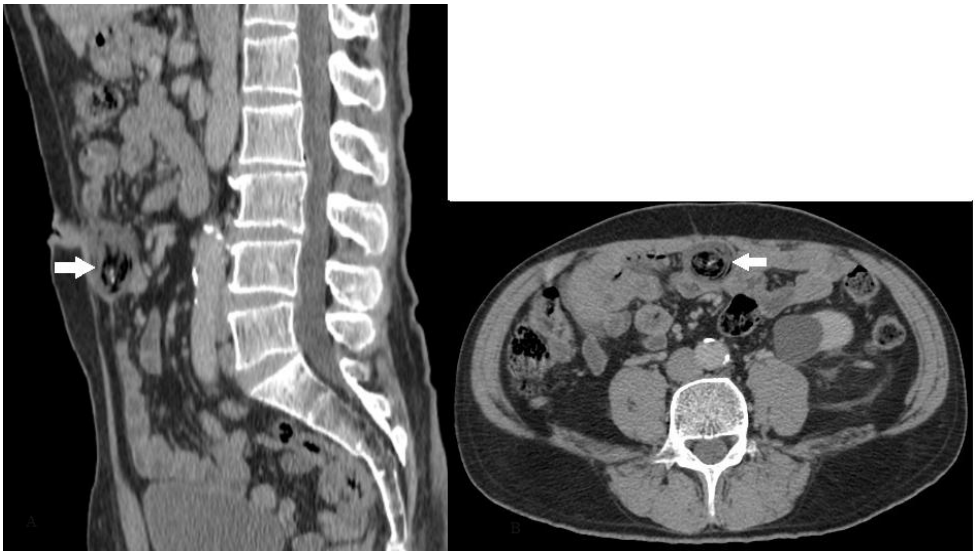

Figure 1 : Sagital and axial images of contrast-enhanced CT scan showing well defined heterogeneous mass (arrow) with anterior location situates just beneath the umbilicus; containing fat and few calcifications.

DISCUSSION

The urachus is an embryological ductal vestige of the allontois, situated between the umbilicus and the anterior dome of the bladder, behind the transversalis fascia and anterior to the peritoneum, in a space named "Retzius" [4]. This structure is generally closed at nascence. In case obliteration doesn't take place, several congenital and acquired disorders appear [4]. Of the forms of congenital urachal, we can mention four: patent urachus, vesicourachal diverticulum, umbilical urachal sinus, and urachal cyst. As for patent urachus, the whole urachal duct stays patent, connecting the bladder to the umbilicus, which leads to drainage of the urine from umbilicus. An established communication is set between bladder dome and urachus, this communication is referred to as vesicourachal divericulum. Urachal sinus is patent only from the urachus to the umbilicus. However urachal cyst communicates neither with the bladder nor with the umbilicus [5]. The last three from of urachal anomalies might come to a close naturally after birth, but they may open again due to pathologic circumstances that are usually considered as acquired illnesses [6;7;8]. Those conditions are basically asymptomatic. Still, they may change into symptomatic ones if they are related to an infection. The latter is seen as the most frequent compaction, as well as neoplasms that are sporadic; they may be benign like fibromas, adenomas, hamartomas and fibroadenoms [9;10]. or malignant as urachal adenocacinoma, which is absolutely the most frequent kind. Literature searches have shown limited cases of tumors like squamous cell carcinoma, rhabdomyosarcoma, teratoma and sarcoma. Nonetheless 34% of bladder adenocarcinoms are of urachal source [11;12]. Because of their extraperitoneal situation, urachal tumors seem to be basically silenced.

Teratomas are seen as infrequent diseases. They include many histologic sorts of tumors, most usual dermoid cyst or mature teratoma [13]. It is an enclosed mass that may occur at many positions in the body. It is made of well distinguished derivations, at least two of three germs layers namely endoderm, mesoderm and ectoderm. The germinal constituents can manifest themselves as hair folliculs, bone, sweet glands and pockets of sebum, thyroid tissue, fat, cartilage, teeth and nail. The combination of urachal anomalies and teratomas is regarded as extremely a unique case [14]. The capital manifestations being repeated is lower UIT and abdominal pain essentially periumbilical, while umbilical discharge was limited to the pediatric cases. More often, urachal teratoma diagnoses via ultrasonography as an echogenic mass that embodies a posterior acoustic shadowing thank to sebaceous material and hair into calcific constituent inside a cyst. CT scan is an effective technique in demonstrating calcifications and fat inside a mass lesion. This technique is marked by its high sensibility.

In general, urachal tumors could be radiologically appraised with US or CT. Fisutlography or cystography could be realised to show contiguity with the urachus. Ultrasonography could present essential imaging of urachal tumours at the midline, superior to the bladder. CT could specify mucinous, cystic, solid and calcified composing of the lesion. MRI is indicated if the aspect of the mass is ambiguous. CT or MRI is more appropriate to depict anatomical rapports of the process with neighbouring structures [15;16;17]. If a malignant tumour is suspected, a coelioscopy is indicated for therapeutic and histological study aims.

CONCLUSION

Urachal anomalies are scarce. The variability of clinical presentations can make the diagnosis delicat. Therefore, it is supplemented by ultrasonography and CT-scan in order to locate the mass and specify its content. However, coelioscopy allows ensuring complete exeresis of the mass and confirming the diagnosis by anatomopathological study.

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