



Case Report

A rare case of urachal cyst in a 35 year old male—A case report

Muthiah Muthulakshmi^a, S. Jayakumari^{b,*}, K. Prabhu^b, M. Kavimani^b^a Community Medicine, Sree Balaji Medical College & Hospital, Bharath University, No 7 CLS Works Road, Chromepet, Chennai, 600 044 Tamil Nadu, India^b Department of Anatomy, Sree Balaji Medical College & Hospital, Bharath University, No 7 CLS Works Road, Chromepet, Chennai, 600 044 Tamil Nadu, India

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ABSTRACT

Urachal cysts are anomalies related to the persistence of urachal remnants after the birth. They are seldom asymptomatic, but in some cases they mimic acute abdominal disease. We report a case of 35 years old man with abdominal pain and scanty discharge from umbilical region caused by infected urachal cyst. The abdominal palpation showed soft tenderness present at the lower abdominal wall. The computed tomography revealed benign cystic lesion at the anterior abdominal wall. The therapy was complete surgical excision and local application of antibiotics.

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1. Introduction

The Urachus formatively is the upper part of the bladder, both of which emerge from the ventral part of the cloaca. The plummet of the bladder from the fifth month of advancement into the fetal pelvis pulls the urachus with it bringing about the arrangement of the Urachal trench.

The Urachus varies from 3 to 10 cm in length and from 8 to 10 mm in diameter. The lumen of this trench continuously demolishes amid fetal life, with inevitable development of a stringy tract in early grown-up life.¹ Toward the end of improvement, the Urachus lies between the transversalis fascia anteriorly and the peritoneum posteriorly (space of Retzius), encompassed by free areolar tissue and appends the umbilicus to the arch of the bladder.

The incomplete regression of fetal urachus is known as abnormal Urachus. It was commonly observed in the children than adult. It usually causes the clinical problem in children. In the adult it was found an infected urachal cyst (UC). The incidence of UC was unknown and very rare. It is more common in men than women. Cabriolus (1550) was a first person to identify the Urachal abnormality in few cases.

Histologically, it is composed of 3 layers; an innermost layer of modified transitional epithelium similar to the urothelium 70%, the middle layer of fibro connective tissue and the outermost layer of smooth muscle continuous with the detrusor muscle.^{2,3}

Till complication occur the Urachal cyst remain asymptomatic. In this study case of Urachal abscess with discharge was reported.

2. Case presentation

A 35 year old man admitted to the hospital with central abdominal pain for months and scanty, serous and turbid umbilical discharge from 2 months. On his physical examination the body temperature was afebrile, the blood pressure was 120/80 mmHG and the pulse was 78/mint.

The laboratory data revealed RBC –5.5 million/cu.mm, Neutrophils 59.7% lymphocytes 34.2%, mast cells 3.6%, Hemoglobin – 14 gm./dl, PCV –41% platelets count – 2.06 lakhs/cu mm and ESR– 5 mm/h.

During Bimanual examination patient lied in the supine position, the abdomen was flat, umbilicus central and inverted. No swelling, no discharge from the umbilicus. There was visible peristalsis, the hernia orifice was free. Abdominal palpation showed soft, tenderness present at the lower abdominal wall. The contrast-enhanced computed tomography showed 1.3 cm × 1 cm benign cystic lesion with the collection of fluid at the midline of anterior abdominal wall. It was found 4 cm from the umbilical region superficial to the sigmoid colon (Fig. 1).

The Urachal remnant was traced from umbilicus to the dome of the bladder (Fig. 2). The bladder was opened and examined. The patient was catheterized. His post-operative course he was admitted to 3 weeks catheter was removed. He was comfortable. The histopathology report revealed fibro collagenous cystic wall lined by single layer of the cuboidal to columnar epithelium. Some of the cells contain brown pigment. Wall shows congested blood vessels and areas of hemorrhage. Initially, administration of

* Corresponding author.

E-mail address: jayakumarinisha@gmail.com (J. S.).

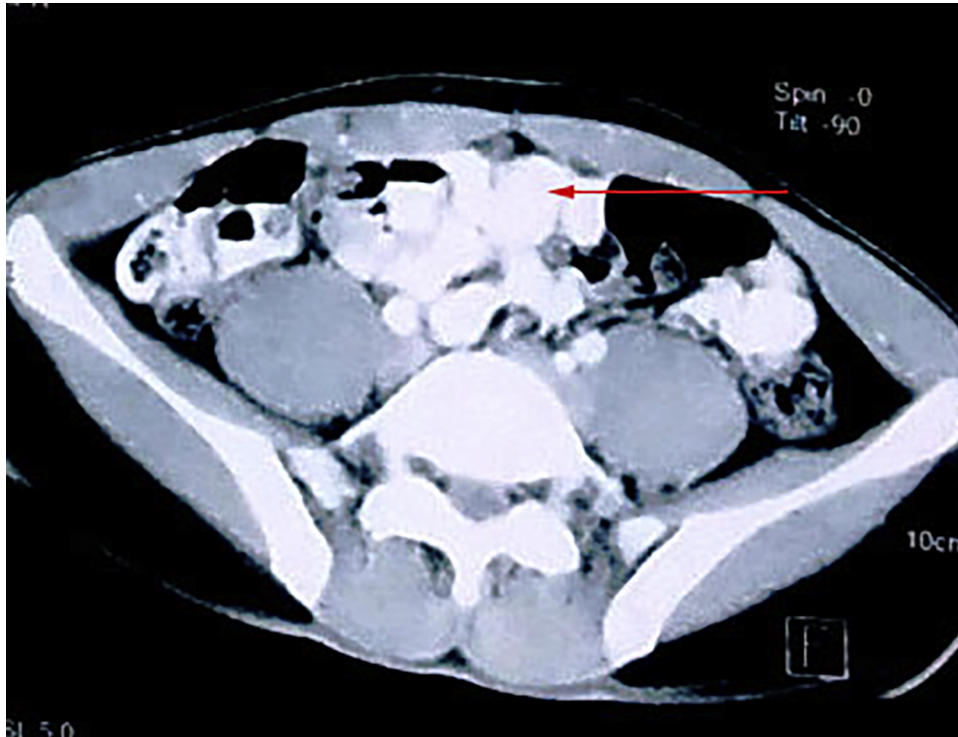


Fig. 1. CT scan reveal the presences of urachal cyst at the anterior abdominal wall.

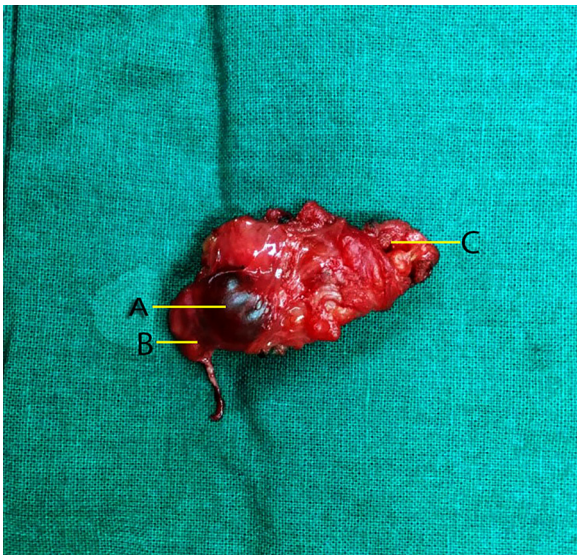


Fig. 2. Shows the excised specimen. A. Cyst. B.Umbilical end C. Bladder end.

antibiotics and resolution of inflammation, followed by surgical removal.

3. Discussion

In adults urachal cyst occur very rarely. The presentation and diagnosis may be occasionally challenging. Urachal anomalies are more commonly found in children and are rarely observed in adulthood. Congenital Urachal anomalies are twice as common in men as in women.⁴ Modes of presentation differ from those seen in children.

The most regularly watched and oversaw Urachal inconsistencies in kids are: Urachal sore (54%), Urachal sinus (30%), patent Urachus or vesicourachal diverticulum (around 3%–5%). Urachal disease (51%) and Urachal blister (35%), which is typically contaminated, are the most incessant modalities analyzed in grown-ups. A few patients with Urachal remainders are asymptomatic.^{5–7}

The remnants of Urachus found in neonates younger than 6 months usually resolve spontaneously without the need for surgery. Those found in older patients require management because of a greater the risk for infection. The route of infection is hematogenous, lymphatic, direct or ascending from the bladder. The habitations of microorganisms in the cystic liquid incorporates *Escherichia coli*, *Enterococcus faecium*, *Klebsiella pneumoniae*, *Proteus*, *Streptococcus viridans* and *Fusobacterium*.

These microorganism increase risk of neoplastic differentiation in adult.^{8,9} Urachal Cyst slowly enlarges and may drain through the umbilicus, or drain into the bladder or both, resulting in the alternating sinus. However, the presence of the triad of symptoms including a tender midline infra- umbilical mass, umbilical discharge and sepsis should arouse suspicion of Urachal Cyst. Typical clinical manifestations of patent Urachal pathologies are not seen in our case. In our case, abdominal pain was the one of the symptom of the disease, and can mimic an acute abdomen due to appendicitis or Meckel's diverticulum. The differential diagnosis of an umbilical mass should include hematoma, abscess, umbilical hernia, urachal carcinoma and tumors of the abdominal wall. Ultrasound can be useful, yet not adequate, as appeared by our case. CT is the most imperative in the indicative work-up. Still it did not reveal the type of Urachal anomaly with a sufficient degree of accuracy. Ashley et al.⁸ found that patients older than 55, who experienced an episode of hematuria, were at greatest risk of having Urachal malignancy, most commonly an adenocarcinoma.

For our situation, there was no doubt for threat because of the patients' ages, negative history suggestive of danger (hematuria) and CT examines. Therefore, cystoscopy was not performed. At the

point when Urachal disease can't be rejected (hematuria and mass saw at the bladder arch on imaging) cystoscopy with biopsy and pee. Cytology is positive in 38% of patients with Urachal carcinoma and is correlated with an increased tumor grade. Histopathology slide reveal in this case the lumen shows fibro collagenous cyst wall lined by single layer of cuboidal to columnar epithelium. In any case, as indicated by Schubert et al.¹⁰ Berman et al.⁵ it is a three layered tubular structure, the deepest layer being fixed with transitional epithelium in 70% of cases and with columnar epithelium in 30%. The structure is encompassed by connective tissue and a furthest strong layer in proceed with the detrusor muscle.

In the event that Urachal pathology shows up with indications of contamination, a two-stage treatment is prescribed in benevolent Urachal oddities, finish extraction, with or without the sleeve of the bladder, is adequate. It is not important to evacuate the umbilicus. On account of Urachal disease, incomplete or radical cystectomy ought to be considered.^{7,10,11} In this case the patient received a course of antibiotics following which the discharge subsided.

4. Conclusion

Urachal oddities are uncommon in grown-ups. The presentation is atypical; in this manner, a high record of doubt is required keeping in mind the end goal to accomplish a conclusion. A triad of lower midline mass, umbilical discharge and sepsis is suggestive and should arouse a suspicion. Complete surgical excision is the treatment of choice due to the risk of malignant transformation. Two phase treatment with a mix of expansive range anti-toxins or entry point and seepage, trailed by interim extraction after

determination of sepsis. Understanding the life structures and the imaging elements of Urachal leftover illnesses, alongside the run of the mill areas and appropriations of these infections, is basic for right finding and legitimate administration.

Conflicts of interest

The authors have none to declare.

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