



## A RARE PRESENTATION OF INFECTED URACHAL SINUS IN AN ADULT – CASE REPORT

|                               |  |
|-------------------------------|--|
| <b>Prof. Dr. B. Santhi</b>    | MS (General Surgery), DGO, Professor and Head of the Department, Department of General Surgery, Government Kilpauk Medical College, Chennai – 600010.                                |
| <b>Dr. S. Karthikmuthuram</b> | MS (General Surgery), Assistant Professor, Department of General Surgery, Government Royapettah Hospital, Government Kilpauk Medical College, Chennai – 600010.                      |
| <b>Dr. C. Arulraj*</b>        | MBBS, Postgraduate in MS General Surgery, Department of General Surgery, Government Royapettah Hospital, Government Kilpauk Medical College, Chennai – 600010. *Corresponding Author |

### ABSTRACT

Urachal anomalies are infrequent in adult population. Few cases of urachal sinuses are reported and are usually asymptomatic unless a complication occurs, most likely infectious. Clinical manifestations include purulent umbilical discharge, abdominal pain and periumbilical mass. We report a rare case of late presentation of an infected urachal sinus in a male adult. Antibiotic therapy was followed by surgical excision. Histological examination revealed no signs of malignancy.

### KEYWORDS :

#### INTRODUCTION AND BACKGROUND:

Urachal anomalies result from the persistence of urachus, a ductal remnant of the regressed allantois extending from the umbilicus to the apex of the bladder. Four varieties of urachal abnormalities exist patent urachus, umbilical cyst, umbilical sinus, and vesico-urachal diverticulum. Uncommon in adults, they represent a diagnostic challenge. Umbilical discharge/mass, abdominal pain and haematuria are possible clinical presentations. Imaging plays an invaluable role in detection and characterization. Infection and malignancy can occur. We highlight diagnostic and therapeutic features of urachal anomalies through the case report of an infected urachal sinus in a male adult.

#### CASE REPORT:

A 50 year old male presented with complaints of pus discharge from umbilicus for 10 days. No history of similar episodes in the past. Bladder and bowel habits were not altered.

Routine investigation showed leukocytosis and elevated CRP. Patient was afebrile. On examination, infraumbilical swelling of size 5X4cm which was tender associated with pus discharge. USG revealed urachal cyst with sinus tract formation near the bladder wall.

MRI fistulogram with contrast CT showed umbilical urachal sinus[6cm] with secondary infection with obliterated urinary bladder end with few tiny calcifications[total tract length was 10cm]. No obvious communication with the bladder lumen was noted.



**Fig. 1:** Contrast CT showing umbilical urachal sinus with few tiny calcifications

Swab culture identifies staphylococcus growth and received a course of antibiotics followed by surgical excision with umbilicectomy after cystoscopic examination.



**Fig. 2:** Post operative specimen of urachal sinus tract along with umbilicectomy

#### DISCUSSION:

The urachus is a ductal remnant extending from the bladder's anterior end to the umbilicus. It originates from the allantois and the cloaca's involution. It is normally obliterated in utero or early childhood and becomes the medial umbilical ligament. Its persistence gives rise to a variety of urachal anomalies: Patent urachus (50%): a free vesico-umbilical communication, Umbilical cyst (30%): a remaining double blind ending cavity of the urachal canal, Umbilical sinus (15%): a blind-ending tract communicating with the umbilicus, Vesico-urachal diverticulum (3-5%): an obliterated tract communicating with the bladder.

Urachal abnormalities' incidence in children is 1 in 5000 and male to female ratio 3:1. Occurrence in adults is uncommon (2 per 100,000 hospitalizations) and constitutes a diagnostic challenge. Umbilical discharge/mass, abdominal pain, and hematuria are possible clinical presentations. Umbilical discharge aids in diagnosis. Pus discharge points towards urachal sinus. Urine discharge indicates patent urachus, and hematuria suggests vesico-urachal diverticulum.

Imaging plays an invaluable role in urachal anomalies detection and characterization. Ultrasound is the modality of choice for initial screening. Other recommended imaging modalities are sinography, CT and Magnetic resonance imaging. In the setting of an umbilical-urachal sinus: US, CT and MRI demonstrate a tubular blind-ending tract extending

the umbilical end. Sinography confirms the lack of communication with the bladder. A bladder communication is diagnostic of a patent urachus. Urachal cysts appear as fluid-filled structures along the urachus theoretic course. Vesico-urachal diverticula extend the anterior bladder dome and do not communicate with the umbilicus.

When not detected rapidly and treated promptly, urachal pathology can cause significant morbidity. Infection is the most common complication in adults as in the pediatric population. Malignancy may develop as well in the adult population. Other complications include umbilical granulomas and lasting urinary infections.

Calcifications may arise due to urinary stasis and cyst wall's glandular epithelium calcification. They most commonly involve urachal cysts and vesicourachal diverticula. A progressively enlarging urachal cyst can rupture, obstruct intestines, or fistulize into the adjacent bowel.

**CONCLUSION:**

Infected urachal sinus is uncommon in adults. Diagnosis is challenging requiring high index of clinical suspicion. A periumbilical mass, umbilical discharge and sepsis are suggestive. Ultrasound and CT scans diagnostic roles are invaluable. Antibiotic therapy followed by surgical intervention prevent malignant transformation and recurrence.