



## URACHAL SINUS PRESENTING AS UMBILICAL DISCHARGE - A CASE REPORT.

## General Surgery

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## KEYWORDS

## INTRODUCTION :

Urachus represents the embryonic remnant of allantois and cloaca. This obliterates with the development of fetus and forms the fibrous cord connecting bladder from the umbilicus known as median umbilical ligament(1,2).

Abnormalities of the incomplete obliteration of the urachus leads to urachal anomalies. The different types of anomalies are urachal cyst, urachal sinus, patent urachus upto umbilicus and vesicourachal diverticulum. Most of these anomalies are found in children and very rarely in adults (1,2).

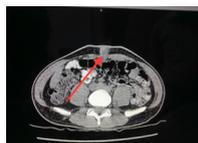
Because of nonspecific symptoms and sometimes difficulty in identifying the tract when not completely patent, makes it a diagnostic challenge. Also there are chances of developing malignancy later when not excised in toto(3).

## CASE REPORT:

A 28 years old male patient came to our surgery department , with chief complaints of pain in the umbilical region following blunt trauma while playing cricket. Along with that he noticed discharge from the umbilicus which was serosanguinous since 5 days. On examination there was erythema surrounding umbilicus and discharge (figure 1). Per abdominal examination there was mild tenderness surrounding umbilicus, no tenderness /guarding/ rigidity on deep palpation and no organomegaly. Patient was advised ultrasonography of abdomen and the local area to rule out any collection. Ultrasonography was suggestive of peri-umbilical collection with no intraperitoneal connection. Subsequently contrast enhanced CT scan (Computerised Tomography) was done suggestive of umbilical abscess extending upto pre peritoneal space (figure 2, 3). Urinary bladder was normal, bowel loops were normal. Patient was started on injectable broad spectrum antibiotics. Keeping the differential of urachal sinus in mind patient was posted for surgery. Intra- operatively methylene blue dye was injected through the umbilical opening , periumbilical incision was made and dissected upto the pre peritoneal space(figure 4). The dye was found going downwards in the pre peritoneal space through a tract. The tract was opened and was found ending 2-4cm above urinary bladder and remnant connected to bladder as a cord. There was no spilling of dye in urine. The sinus tract was excised. Post operative course was uneventful.



**Fig 1: Clinical picture of umbilicus of patient showing granulation tissue with**



**fig 2: CECT scan showing umbilical abscess discharge seen over the gauge.**



**Fig 3: CT Scan sagittal plane showing umbilical abscess urachal sinus in the pre-peritoneal space.**



**Fig 4: Intra-operative picture of urachal sinus.**

## DISCUSSION:

Urachus is vestigial remnant of the embryonic structures of allantois and cloaca. During development, as the urinary bladder descends it carries a stock of allantois from umbilicus known as urachus. These structure usually obliterate during development or upto infancy and known as median umbilical ligament. The urachus is present in the preperitoneal space and connected to the bladder from the umbilicus. Urachal sinus is a patent urachus towards the umbilical end. Urachal sinus are rare type of urachal anomalies. Most of them remain asymptomatic until complicated (like abscess formation with umbilical discharge).

Patients presenting with umbilical discharge can have various congenital or acquired anomalies. As umbilicus has a complex development pattern and patent urachus is one such anomaly. The other umbilical discharge pathologies can be pilonidal sinus, foreign body, acute or chronic non specific inflammatory causes and very rarely malignancy<sup>(4,5)</sup>. The incidence of urachal anomalies is 2 per 100,000 in adults, which usually present infancy up to 2 years age if not detected at birth(2). The urachal abnormalities are common in children with rare presentations in adults(3).

The urachal anomalies due its rarity and uncommon symptomatology has a diagnostic challenge. Thus , if we have proper clinical and imaging workup the urachal anomalies can be managed efficiently. Imaging has a definite role in diagnosing what kind of urachal anomaly is present, on which we can decide the surgical line of management required for the patient. Ultrasonography urachal sinus manifest as thickened tubular structure below the umbilicus in the midline (6). This can be confirmed on sinography.

The treatment for urachal sinus is excision in single stage if not complicated or even a 2 stage procedure can be done if complicated with abscess formation or granuloma formation. firstly antibiotics can be given and later excision of tract. Both the procedures have

equivalent results without post operative complications (7). In our patient we did 2 stage procedure . First patient was given broad spectrum antibiotics to reduce the inflammatory process and later under the cover of antibiotics excision of complete tract with umbilectomy was done. Post operatively there were no complications.

#### **CONCLUSION:**

Urachal sinus is a rare type of urachal anomaly. Diagnosis of it becomes difficult if complicated with abscess formation or presenting with discharge from umbilicus. Therefore while diagnosing the causes of umbilical discharge urachal sinus should be kept in mind. Treatment is surgical excision to prevent further complication or malignancy.

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