



A Case Report of Infected Umbilical- Urachal Sinus

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Abstract

Urachal sinus is a rare anomaly. Usually it is an incidental finding and present when complication develops. High degree of suspicion is needed to diagnose such cases. We are presenting a case in which a young female presented with infected umbilical- urachal sinus.

Keywords: *Urachus, umbilical granuloma, urachal sinus, infraumbilical abscess.*

Introduction

Umbilical-urachal sinus is a developmental anomaly of urachus in which proximal part of urachus remains unobliterated. It leads to persistent discharge from umbilicus and sometimes lead to abscess formation. Other anomalies related to urachus are Patent urachus, urachal cyst and vesicourachal diverticulum. An umbilico-urachal sinus must be differentiated from unobliterated omphalo-mesenteric duct which also present with similar features.

Case Presentation

23 year old female presented with complains of pain around the umbilicus since 7-8 days and an infraumbilical swelling along with pus discharge through it. H/O low grade fever since 7-8 days.

On examination patient is febrile (temp. 99.5°F) and a swelling of around 8×5 cm present in infraumbilical region. Local temperature is raised and active pus discharge seen.

USG Whole Abdomen showed Focal irregular collection around 38×33×17mm in anterior

abdominal wall muscular plane in infraumbilical region with sinus tract opening in umbilicus.

Patient is planned for diagnostic laparoscopy and incision and drainage of abscess. Diagnostic laparoscopy was normal except omentum found to be adherent with umbilicus. Adhesiolysis of omentum done. Exploration of umbilicus showed umbilical granuloma. Fig.1 shows umbilical granuloma.



Figure 1 This picture is taken during surgery showing umbilical granuloma

Incision and drainage of abscess done. Abscess cavity found to contain proximal unobliterated urachus. Urachus is traced upto apex of urinary bladder and excised. In view of umbilical granuloma umbilicus is also excised. Histology reveals no evidence of malignancy. Fig 2 shows abscess cavity with urachus.

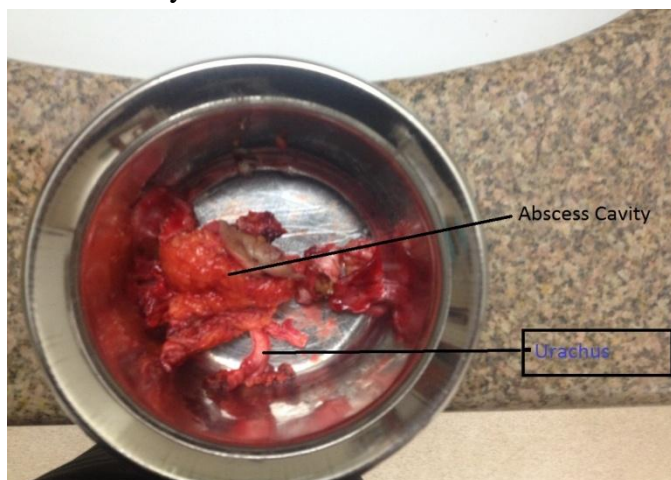


Figure 2 This is the specimen after surgery containing abscess cavity with urachus.

Discussion

The urachus is a tubular, midline structure, located in preperitoneal space, lined by obliterated umbilical arteries with its base on the dome of the anterior bladder and the tip directed towards the umbilicus. The urachal length varies from 3 to 10 cm^[1]. By the 10th week of gestation the bladder is a cylindrical tubelined by a single layer of cuboidal cells surrounded by loose connective tissue. The apex tapers as the urachus, which is contiguous with the allantois. By the 12th week the urachus involutes to become a fibrous cord, which becomes the median umbilical ligament^[2]. It has a diameter between 8 and 10 mm and can connect with one or both obliterated umbilical arteries. Because the urachus is surrounded by the umbilicovesical fascia, disease process usually remain contained inside the pyramid-shaped space (Hammond et al, 1941).

The urachus involutes normally before birth and persists as a fibrous band^[3]. There are four types of congenital anomalies 1) Patent Urachus 2) Umbilical- Urachus sinus 3) urachal cyst 4) vesicourachal remnant.

Urachal sinus abscess usually occurs by infection of mucinous secretion via the umbilicus. The commonly cultured microorganisms from the pus are Escherichia coli, Enterococcus faecium, Proteus, Streptococcus viridans and Fusobacterium^[4].

The clinical signs and symptoms are nonspecific, as urachal sinus is largely asymptomatic until they become infected. However, the presence of the triad of symptoms including a tender midline infraumbilical mass, umbilical discharge and sepsis should arouse suspicion of urachalsinus^[5]

Differential diagnosis of this condition includes anomalies of the vitelline ducts (such as Meckel's diverticulum), patent omphalomesenteric duct, infected umbilical vessel, appendicitis, or omphalitis^[6].

Urachal lesions are diagnosed by ultrasonography and CT scan. An abscess cavity present inside the extraperitoneal space of abdominal wall and extension towards the umbilicus gives a clue to the diagnosis^[7]. USG is normally sufficient for diagnosing a case of urachal abscess. But if USG is inconclusive or malignancy is suspected CT scan can be done.

Treatment of urachal sinus depends upon complications. An uninfected sinus requires single step radical excision of entire urachal remnant with or without a cuff of bladder via open or laparoscopic approach. An infected sinus requires either a single step excision with appropriate antibiotic or 2- stage procedure involving initial incision and drainage followed by later excision of urachal remnant^[8]

Conclusion

Infected Umbilical - urachal sinus is a rare anomaly seen in adults. It should be kept in mind as differential diagnosis when patient presents as infraumbilical abscess. USG and CT scan are diagnostic. Treatment involves appropriate antibiotic and complete excision of all urachal remnant to prevent recurrence and neoplastic transformation.

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