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CASE STUDY

A RARE CASE OF PATENT URACHAL SINUS IN ADULT CASE REPORT

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ABSTRACT

Urachal sinus is one of a spectrum of urachal abnormalities and it most commonly found in children. They are very rarely seen in adults. We report here a case of infected urachal sinus in 18 year old male. Patient was present with bloody umbilical discharge and periumbilical pain. The diagnosis was suspected clinically and conformed with ultrasonography and computed tomography scan. An initial broad spectrum antibiotic therapy followed by compete excision of the sinus and fibrous tract without cuff of bladder has been therefore performed.

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INTRODUCTION

Urachal anomalies are rare. It is usually developed from a congenital abnormality in which a persistent or partial re-opening of the fetal communication between the bladder and umbilicus persists. Because of its rarity and different ways of presentation may represent a diagnostic challenge. Urachal sinus is one of the types of its anomaly. Since the first description by Cabriolus in 1550, few case reports of infected urachal sinus have been reported in literature (Hsu *et al*., 2005). These are usually an incidental findings and remain asymptomatic unless a complication (most commonly the infection) occurs. Umbilical discharge is the most common symptom (Risher *et al*., 1990). Infection of urachal sinus would clinically present as purulent umbilical discharge, abdominal pain and periumbilical mass.

Case report

An 18-year-old male patient presented with a three days history of bloody umbilical discharge with mild periumbilical tenderness without digestive nor urinary symptoms. Past History revealed of similar complaint 4months back and taken a course of an oral antibiotics. On Physical examination there was a bloody umbilical discharge with erythema and tenderness.

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Laboratory tests revealed leucocytosis of 12,000/mm^3 and elevated ESR. The urine routine and renal function were within normal values. Abdominal ultrasonography suggested a normal study. Computed tomography scan conformed the diagnosis of infected urachal sinus showing a fibrous track extending from bladder to the umbilicus (Fig. 1).

Figure 1.

Figure 2.

Figure 3.

Figure 4.

The patient was initially treated with intravenous antibiotics (ceftriaxone and amikacin). After two days, excision of the infected urachal sinus was performed simultaneously. Cystoscopy was also done and it conformed, no evidence of a bladder anomaly. A periumbilical elliptical incision was used to excise the sinus and fibrous tract with umbilicus (Fig. 2 & 3) and created umbilicus with monofilament suture (Fig. 4). The postoperative course was uneventful. Histological examination did not reveal any signs of malignancy. No recurrence was observed after six months of follow-up.

DISCUSSION

The urachus is a tubular structure. It is vestigial remnant of the cloaca, and the allantois. It normally involutes before birth, remaining as a fibrous cord in adult, located in extraperitoneal space of Retzius in the anterior abdominal wall between the transversalis fascia anteriorly and the peritoneum posteriorly and attaches the umbilicus to the bladder dome. Mostly these anomalies presents in childhood and rarely in adult. The age of adults at presentation has most commonly been between 20 and 40 years with male to female ratio of 2:1(Yadav and Mohan, 2010). Histologically, it presents with 3 layers: an innermost layer of modified transitional epithelium similar to the urothelium, a middle layer of fibro-connective tissue, and an outermost layer of smooth muscle continuing the detrusor (Hammond *et al*., 1941; Ashley *et al*., 2007). Four clinical urachal anomalies have been described: a patent urachus, urachal cyst, urachal sinus and vesicourachal diverticulum (Hammond *et al*., 1941; Rich *et al*., 1983; Blichert *et al*., 1973).

Usually patent urachal sinus goes un-noticed, until it becomes infected by infection of mucinous secretion via the umbilicus or infection of hair follicles at periumbilical region. It consists of blind dilatation of urachus at the umbilicus and may result in periodic discharge. The commonly cultured microorganisms from the pus are staphylococcus aureus, Escherichia coli, Enterococcus faecium, Proteus, Citrobacter species, streptococcus viridans and fusobacterium (Kingsley and Nigel, 2009; Spataro *et al*., 1983). Differential diagnosis in adults are Urachal cyst, Urachal carcinoma, Umbilical hernia ulceration, abdominal abscess (Martin and Lembo, 2004).

Most commonly, the diagnosis is made pre-operatively by a number of different radiographic modalities, including ultrasound, CT and sinography. Recent experience suggests that abdominal CT scans are more sensitive than ultrasonography or sinography in diagnosing all types of urachal anomalies (Yu *et al*., 2001; Iuchtman *et al*., 1993).

Urachal sinus can be complicated by stone and gaseous formation as was seen in our patient. Other reported complications include rupture into the peritoneal cavity leading to peritonitis, uracho-colonic fistula, and neoplastic transformation (Kingsley and Nigel, 2009). The risk of urachal malignancy in adults is high and the prognosis is poor (Ashley *et al*., 2007). The effective treatment of all urachal anomalies are excision. Surgical excision of an urachal remnant involves a transverse or midline infra-umbilical incision with removal of patent tract with the bladder cuff.

Conclusion

Infected urachal sinus is rare in adults with an atypical presentation that is bloody umbilical discharge, therefore, a

high index of suspicion is required in order to achieve a diagnosis. To conform the diagnosis CT scan is the best modality and it also analyses the surrounding anatomical connections. An antibiotic regimen according to bacterial sensitivity is recommended prior to the surgical intervention. Complete surgical excision with or without a bladder cuff is the standard treatment to prevent recurrence and malignant transformation

REFERENCES

Ashley RA, Inman BA, Routh JC, Rohlinger AL, Husmann DA, Kramer SA. Urachal anomalies: a longitudinal study of urachal remnants in children and adults. *J Urol*., 2007;178:1615-1618.

Blichert TM, Koch F, Nielsen OV. Anatomic variations of the urachus related to cinical appearance and surgical treatment pf urachal lesions. *Surg Gyecol Obstet*., 1973;137:51-56.

Hammond G, Yglesias L, Davis JE. The urachus , its anatomy and associated fascia. *Anat Rec*., 1941;80:271-274.

Hsu C-C, Liu Y-P, Lien W-C, Lai T-I, Chen W-J, Wang H-P. Urachal abscess: a cause of adult abdominal pain that cannot be ignored. *Am J Emerg Med*., 2005;23:229-230.

Iuchtman M, Rahav S, Zer M, *et al*. management of urachal anomalies in children and adults. Urology 1993;42:426-30.

Kingsley CE, Nigel JP. Infected urachal cyst in adult: a case report and review of the literature. *Cases Journal*, 2009;2(6) Article ID 6422.

Martin MS, Lembo RM. A 17 year old boy with umbilical discharge. Pediatric Rounds. Hospital physician. May 2004:19-25.

Rich RH, Hardy BE, Filler RM. Surgery for anomalies of the urachus, *J Pediatr Surg*., 1983;18:370-373.

Risher W. H., A. Sardi, and J. Bolton. "Urachal abnormalities in adults: the ochsner experience," *Southern Medical Journal*, 1990;83(9)1036–1039.

Spataro RF, Davis RS, McLachlan SF. Urachal abnormalities in the adult. *Radiology*, 1983;149(3):659-663.

Yadav G, R Mohan. Clinical Profile Of Umbilical Discharge In Adults; A Multicentric Study In North India. *The Internet Journal of Surgery*, 2010 Volume 27 number 1.

Yu JS, Kim KW, Lee HJ, *et al*. Urachal remnant diseases: spectrum of CT and US findings. *RadioGraphics*, 2001;21:451-61.

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