

Case Report

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Urachal Diverticulum presenting as abdominal pain: a surprise at surgery

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ABSTRACT

Background: A urachal diverticulum is one of the spectrum of presentation of urachal pathology, all of which are very rare in adulthood. This report describes the experience of a urachal diverticulum in adult. Urachal abnormalities result from incomplete regression of the fetal urachus. They are more common in children than in adults, due to urachal obliteration in early infancy.

Keywords: Urachus, Urachal diverticulum

INTRODUCTION

Urachal abnormalities result from incomplete regression of the fetal urachus. They are more common in children than in adults, due to urachal obliteration in early infancy.¹ In adults, urachal cyst (UC) is the commonest variety, with infection being the usual mode of presentation.² Diagnosis remains challenging due to the rarity of this lesion and the non-specific nature of its symptomatology. Since the first description of urachal abnormality by Cabriolus in 1550, few cases have been reported in literature. In this report, we describe the progress of a 38-year-old female who presented with generalized abdominal pain who subsequently went on to have a laparotomy where a diagnosis of a urachal diverticulum was made.

CASE REPORT

A 38-year-old female presented with history of pain abdomen since one week on and off. Her past medical history included type 2 diabetes mellitus and patient had undergone appendectomy and tubectomy. Physical

examination revealed generalized vague tenderness all over abdomen and sluggish bowel sounds. Erect abdomen X ray showed no dilated bowel loops or air under diaphragm. Ultrasonography showed prominent small bowel loops with sluggish peristalsis. Patient was prepared for surgery and taken to the theatre.



Figure 1: Band like structure from umbilicus to urinary bladder.



Figure 2: Band excision from the umbilical end.



Figure 3: Confirmation of methylene blue in the Foley's catheter.

Exploratory laparotomy was performed. Intestinal adhesions were noticed which were released and urachal diverticulum was noticed from the umbilicus to the base of the urinary bladder which was opened at the umbilical end and methylene blue dye was injected which was confirmed in the Foley's catheter. The diverticulum was ligated at the bladder end and was excised. Patient recovered uneventfully postoperatively and was discharged on 10th day.

DISCUSSION

The incidence of congenital urachal abnormalities detected at birth or diagnosed early during infancy has been reported to be fewer than 2 cases per 300,000 admissions to a pediatric hospital.³ A considerably higher reported incidence of urachal anomalies in a pediatric autopsy series, 1 per 5000 births, suggests that most patients with urachal remnants do not develop

symptomatic, clinically detectable disease.⁴ There are fewer reported cases of urachal disease in adults than in infants. Persistence of all or a portion of the urachus results in a variety of urachal anomalies. The urachal lumen may remain completely opened allowing free communication between the bladder and the umbilicus, that is, a patent urachus. The urachus may fail to close at either the umbilical or bladder end, causing a sinus or a diverticulum. The urachus also may be obliterated at both ends, with a remnant beneath the umbilicus in the extra peritoneal position as an isolated cyst.

Ultrasonography and CT are useful in supporting an initial clinical diagnosis of urachal remnants.⁵ The optimal treatment for a urachal remnant is surgical excision. A staged approach of therapy, with initial medical management followed by delayed surgical excision, appears appropriate for patients with septic signs.

Infected urachal remnants have occasionally been treated with drainage alone, but it has been reported that the persistence of epithelium leads to a recurrence rate of 30% if excision does not follow.⁶

Since malignant degeneration to an adenocarcinoma, sarcoma, or transitional cell carcinoma has been reported to occur with urachal remnants, excision of all urachal tissue is advocated, including a bladder cuff for urachal remnants with demonstrable bladder communication.⁷

The urachal cancer (51%) and urachal cyst (35%), which is usually infected are the most frequent modalities diagnosed in adults.⁸ Urachal anomalies and infections are rare pathological disease entities in adults, which may present only with abdominal pain.⁹

Urachal anomalies in adults is twice as common in men as compared to women.⁸ Radiographic evaluation of urachal anomalies by USG, CT and or MRI is essential for confirming diagnosis. Ultimately, surgical intervention is the treatment of choice. Complete excision is important because malignant degeneration of the remnant is possible.²

CONCLUSION

Urachal anomalies are rare in adults. Presentation is atypical; therefore, a high index of suspicion is required in order to achieve a diagnosis. A triad of lower midline mass, umbilical discharge and sepsis is suggestive, although MRI confirms the diagnosis and defines the surrounding anatomical relationship. Complete surgical excision is the treatment of choice due to the risk of malignant transformation.

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