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INTRODUCTION

- Urachal remnants are rare anatomical defects and can easily be missed by clinicians, thus a high degree of suspicion is required for diagnosis.
- The most common urachal abnormality is a patent urachus, which is easily diagnosed in infancy.
- One of the uncommon abnormalities is a urachal sinus, which occurs when the urachus fails to obliterate completely during neonatal development, resulting in a communication with the umbilicus.
- We report three cases of urachal sinus with their management and comparison to current literature.

CASES

- The ages of the three patients were 12, 26, and 38 respectively, and all were males.
- All patients presented with umbilical abscess with leukocytosis and imaging showing abdominal fluid collection.
- The 12 year-old patient (case 1) was initially treated with antibiotics and drainage, which was followed by elective excision of the urachal sinus. Pathology showed fibromuscular soft tissue with a central opening lined by hyperplastic benign urothelial epithelium.
- The 26 year old patient (case 2) presented with an inflamed urachal abscess, underwent drainage of the abscess and excision. Pathology of the urachal sinus showed fibro-collagenous tissue with acute and chronic inflammation.
- The 38 year-old patient (case 3) had prior drainage of abdominal wall abscess, returned 4 months later with recurrence of the abscess. He underwent laparoscopic excision of the urachal sinus with drainage of the abscess. Pathology showed a urachal sinus tract with infection.
- The post-operative recovery of all the patients was uneventful.

IMAGING



Fig 1: Axial CT Image of patient # 1 with infected urachal cyst with red arrows.

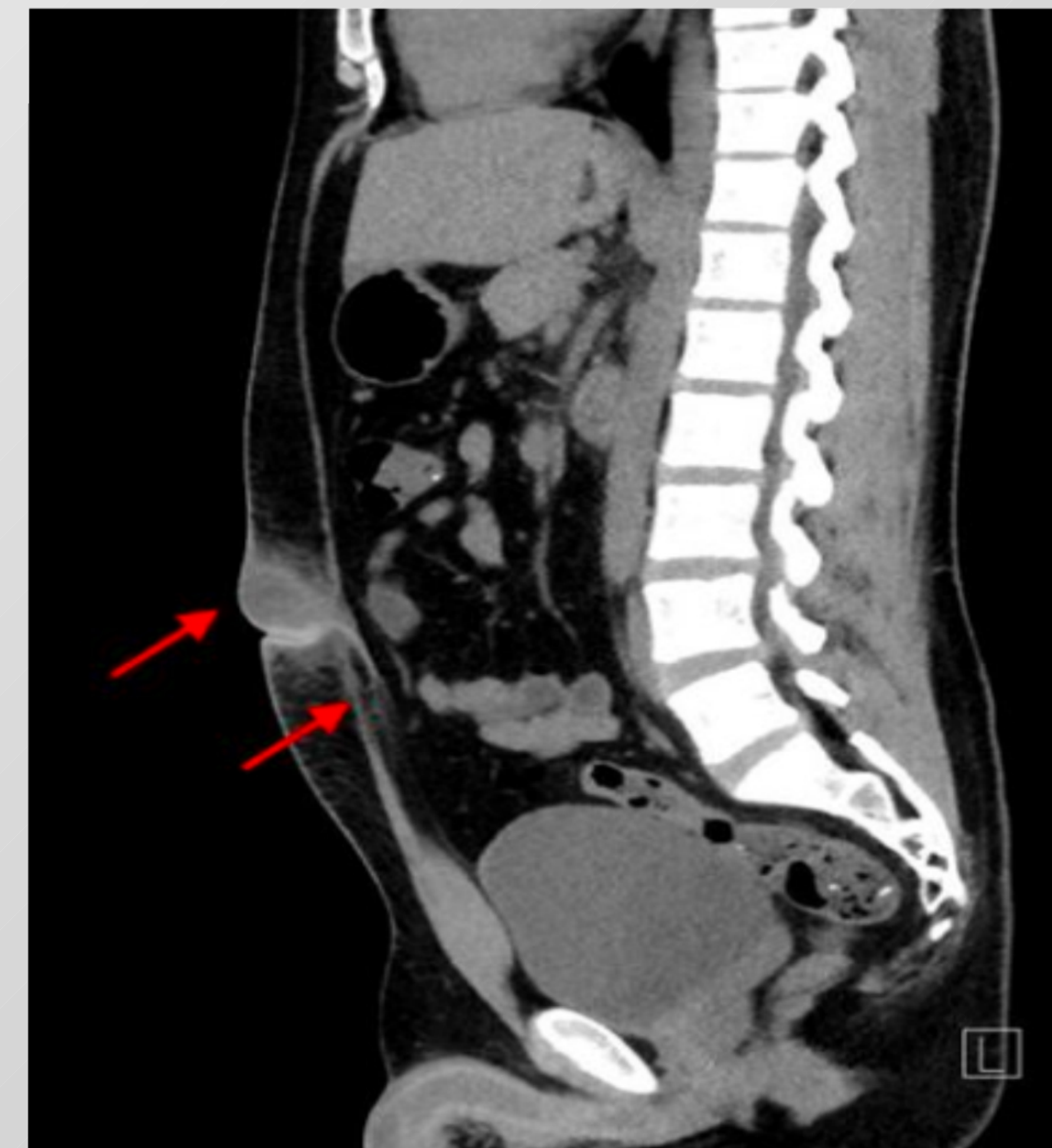


Fig 2: Sagittal CT Image of patient # 2 with infected urachal cyst with red arrows.

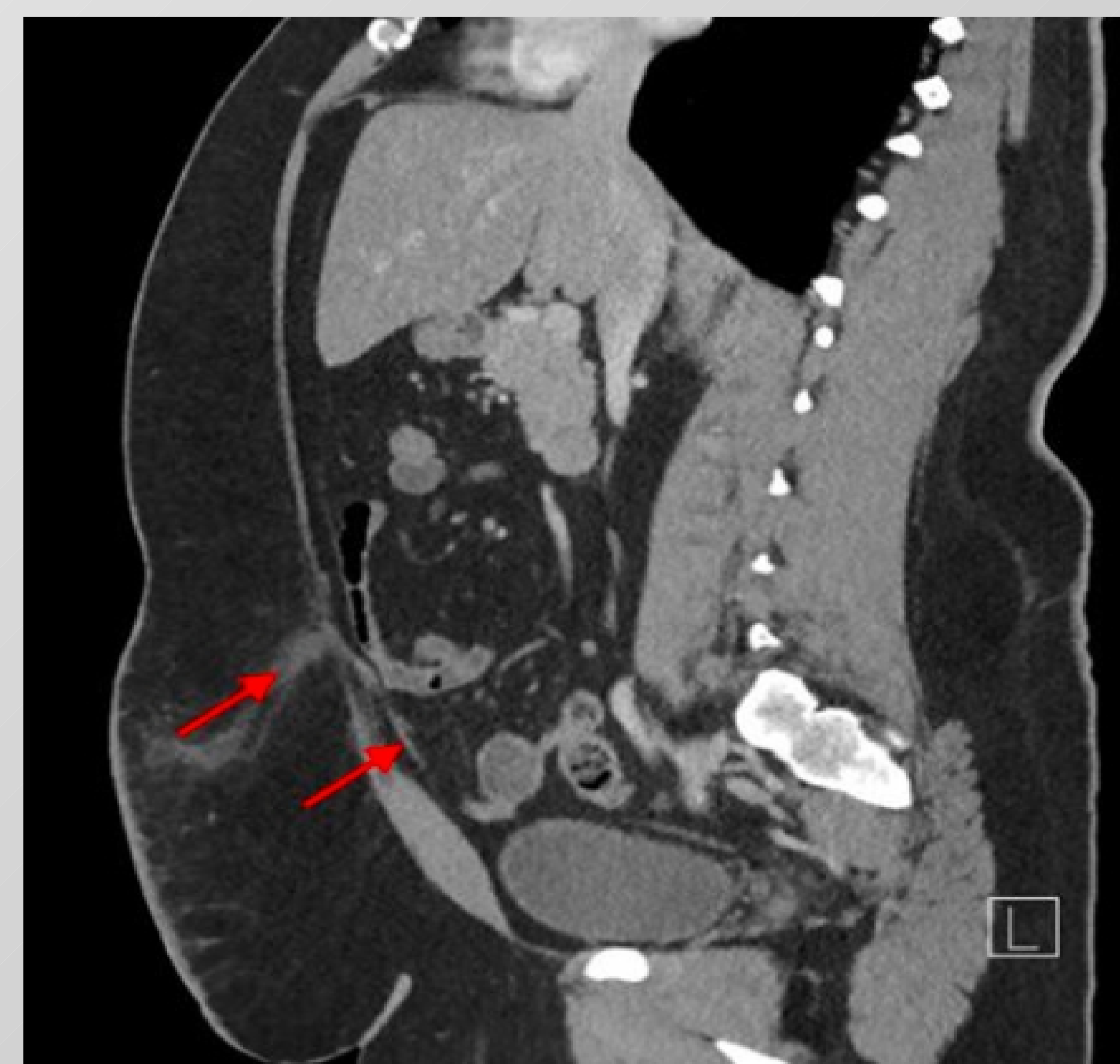


Fig 3: Sagittal CT Image of patient # 3 with infected urachal cyst with red arrows.

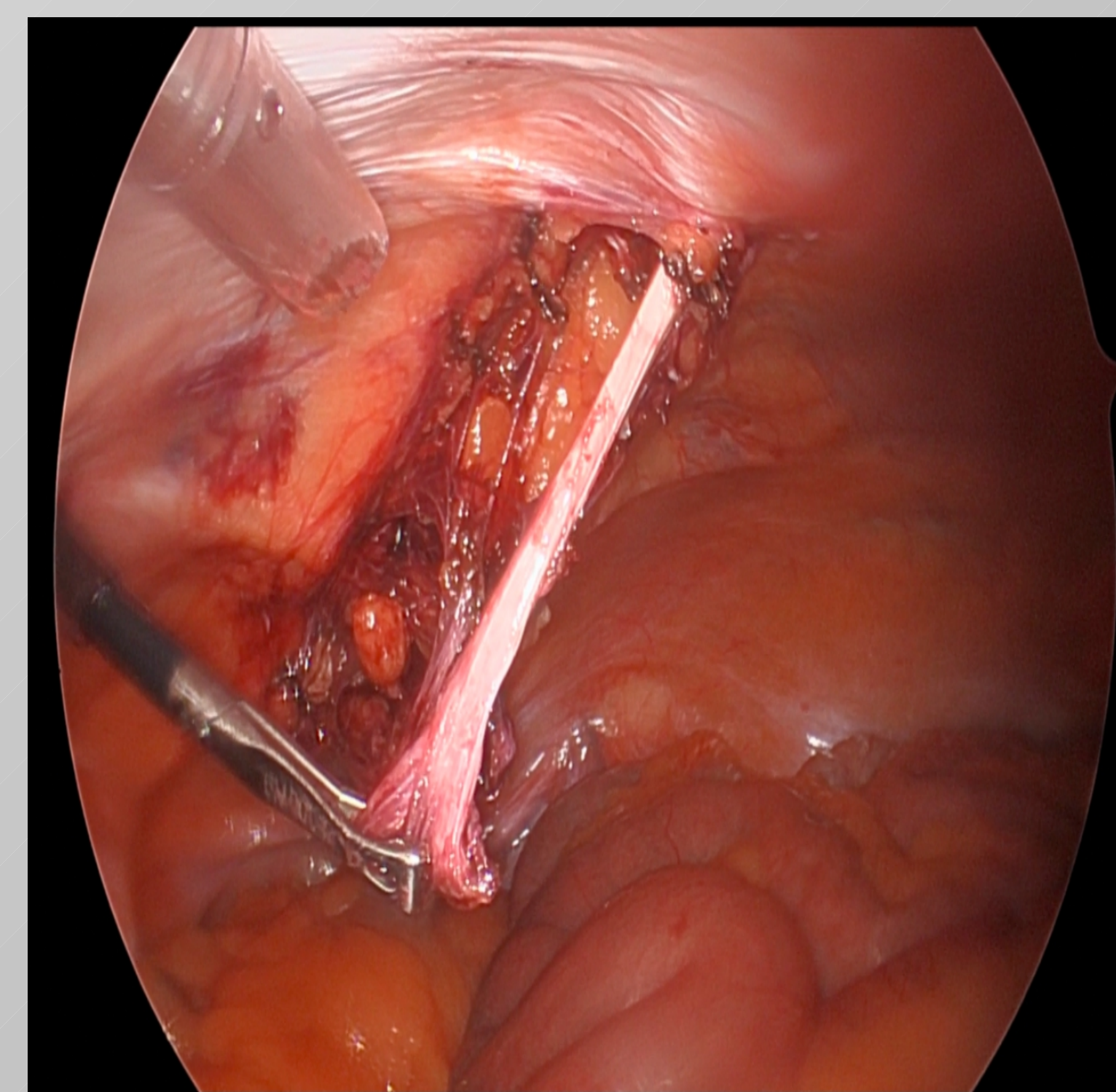


Fig 4: Gross image of urachal cyst

DISCUSSION

- Early diagnosis and proper management of urachal remnant abnormalities is crucial in preventing recurrent infections and long-term complications that are associated with them.
- The incidence of urachal remnant is 1/5000 in adults and 1/150000 in children (1). It is more common in adult males with a male to female ratio of 2:1.
- Proper workup of a patient presenting with infraumbilical abdominal pain and erythema and/or recurrent urinary tract infections, including the utility of an abdominal CT scan is warranted.
- We emphasize the importance of having a high index of suspicion as this is a diagnosis that is easily missed and written off as other more common problems, such as an uncomplicated UTI or abdominal abscess
- Greater effort needs to be made to diagnose these urachal remnants in childhood to prevent malignancy and calculus formation in adulthood and the need for a more extensive surgical excision
- The rarity of the disorder prevents universal screening guidelines, but we believe a multi-institutional study could aid in establishing screening guidelines in children and adults presenting with recurrent voiding symptoms or infraumbilical erythema.
- Selection of treatment strategy should depend on the presentation of the urachal remnant and the associated imaging findings. The current gold standard is surgical resection due to the risk of recurrent infection/inflammation and risk of malignant transformation

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