Diagnosis of Urachal Cyst Misinterpreted as Umbilical Hernia: A Case Report

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Abstract

Urachal diseases are the congenital anomalies resulting from persistent embryonic connection between bladder and umbilicus. Urachal cysts are one of these anomalies. They are very rare in adults and generally asymptomatic unless they are infected and ruptured. In this paper, we present a case of urachal cyst that was misinterpreted as umbilical hernia and taken into operation, then diagnosed perioperatively as urachus cyst and treated with total excision.

Keywords: Umbilical hernia; Urachus cyst; Excision

Introduction

Urachus is an embryonic remnant located between umbilicus and bladder. Normally two ends of the urachus are closed while the median part is open. Generally, the frequency of urachal remnants in the society is 0.1–2%. Urachal cysts develop due to partial obliteration of allantois [1,2]. In this paper, we aimed to present a case that was explored with the initial diagnosis of umbilical hernia but later, diagnosed as having urachal cyst perioperatively.

Case Report

A 56-year-old male patient was admitted to the outpatient clinic of general surgery with complaints of occasional abdominal pains and a diagnosis of umbilical hernia was done during his physical examination. No imaging methods such as abdominal ultrasonography (USG) and Computed Tomography (CT) was implemented for the patient. Routine pre-operative examinations were ordered and the patient was prepared for the operation. When the median incision was performed below the umbilicus, the surgeon recognised a lumen formation before the peritoneum was opened, suggesting that it might be a lesion resulting from umbilical remnants and an urologist was summoned to the operation room. So, an urachus cyst was diagnosed perioperatively and the patient was managed by complete excision of the cyst (Figure 1).

Discussion

Urachus is normally an embryonic remnant of the cloaca and the allantois that transforms into median umbilical ligament at the 32nd week of gestation [3]. Patent urachus, umbilical-urachal sinus, vesicourachal diverticulum or urachal cyst may develop in cases of insufficiency of urachal obliteration. Urachal cysts are the most commonly reported urachal anomalies (30%) [4]. Urachus cysts are usually seen in the lower one third of the urachus and rarely in the upper one third, as it was in our case [5]. Urachus cysts are usually quiescent. They can be detected mostly when they are infected or ruptured. Infected cysts can cause a variety of symptoms such as fever, urinary tract infection, macroscopic hematuria, palpable mass or peritoneal irritation. Intestinal fistula, ureteral obstruction, recurrent urinary tract infection can rarely develop as well as carcinoma at later stages [2]. In our case too, the cyst did not present any significant symptom, hence it was misinterpreted and prediagnosed as umbilical hernia and later diagnosed perioperatively. Appropriate radiological methods for diagnosis are USG and CT. USG alone ensures definitive diagnosis in 77% of cases [6]. We could not take advantage of differential diagnosis with umbilical hernia in our case, since we failed to implement imaging methods.

Conclusion

Although it is quite rare, urachal pathologies should be considered in the differential diagnosis of umbilical hernia and imaging methods like USG and CT should be applied preoperatively.

Conflict of Interest

Authors declared that they have no conflict of interest.

References