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CO-EXISTENCE OF WILMS TUMOUR AND SYMPTOMATIC MECKEL'S DIVERTICULUM: A RARE CASE REPORT

Paediatric Surgery

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ABSTRACT

Wilms tumour (nephroblastoma) is the most common renal malignancy of childhood, whereas Meckel's diverticulum represents the most common congenital anomaly of the gastrointestinal tract. The simultaneous occurrence of these two pathologies is extremely rare. We present a 2-year-old female who presented with acute abdominal pain and distension, found to have a perforated Meckel's diverticulum and a left renal mass consistent with Wilms tumour. A staged surgical approach was undertaken with successful recovery.

KEYWORDS

Wilms Tumour, Meckel's Diverticulum, Nephroblastoma, Acute Abdomen, Pediatric Surgery

INTRODUCTION

Wilms tumour, or nephroblastoma, is an embryonal renal malignancy arising from nephrogenic rests, accounting for 6–7% of childhood cancers.(1) It typically presents as an asymptomatic abdominal mass. Meckel's diverticulum, a remnant of the omphalomesenteric duct, occurs in approximately 2% of the population and may cause bleeding, obstruction, or perforation.(2) To date, no case has been documented in which symptomatic Meckel's diverticulum coexisted with Wilms tumour in the same patient.

Case Description

A 2-year-old female presented with acute abdominal pain, distension, and non-bilious vomiting of one day's duration. Clinical examination revealed a distended abdomen with generalized tenderness, guarding, and fullness in the left flank.

Patient was investigated. Complete Hemogram was suggestive of Leukocytosis. Xray Abdomen Erect showed multiple air fluid levels. Ultrasound abdomen showed A 4 × 5 cm well-defined solid lesion in the lower pole of the left kidney with splaying of intrarenal vessels; dilated bowel loops. CECT abdomen was suggestive of Ruptured Meckel's diverticulum with an exophytic lobulated lesion arising from the middle and lower pole of the left kidney, likely Wilms tumour.

Management

An emergency exploratory laparotomy revealed a perforated Meckel's diverticulum, which was resected, followed by ileo-ileal anastomosis. The left renal mass was confirmed intraoperatively but left in situ at this stage. Two weeks later, after completion of antibiotic therapy, a left radical open nephroureterectomy was performed.

Histopathology: Triphasic Wilms tumour with 60% blastemal, 10% epithelial, and 30% mesenchymal components, involving renal capsule and perirenal fat — favourable histology.

Postoperative care: The patient received adjuvant chemotherapy with Adriamycin, Vincristine, and Actinomycin D, and whole-abdomen radiotherapy. Postoperative recovery was uneventful.

DISCUSSION

Wilms tumour presenting as acute abdomen is uncommon, with reported rates between 25% and 42%. Causes of pain include capsular distension, tumour rupture, or haemorrhage. Spontaneous rupture is rare (0.8–3%). Previous reports describe Wilms tumour with acute appendicitis, but no case involving Meckel's diverticulum has been published. In this case, the acute abdomen was due to a perforated Meckel's diverticulum, not the tumour itself.

Timing of Surgery and Prognosis:(3,4)

- NWTS/COG (Immediate nephrectomy approach): Delays >14 days from diagnosis to surgery may increase the risk of tumour rupture and stage migration, with possible reduction in event-free survival.
- SIOP (Pre-operative chemotherapy approach): Surgery after 4–6 weeks of chemotherapy is ideal; delays >12 weeks can impair resectability and staging.(5)
- LMIC experience: In resource-limited settings, delays >3–4 weeks are associated with tumour progression and rupture.

CONCLUSION

This is the first reported case of Wilms tumour coexisting with perforated Meckel's diverticulum presenting as an acute abdomen. A two-stage surgical approach allowed safe resolution of sepsis and subsequent tumour resection. Timely surgery remains critical, as delays may affect stage and prognosis.

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