Abdominoscrotal hydrocoele: a case report

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ABSTRACT

Abdominoscrotal hydrocoele is a rare condition in which the hydrocoele sac extends beyond the scrotum into the abdomen through the inguinal canal. Various ideas have been proposed regarding this condition but controversy remains. We report a case of abdominoscrotal hydrocoele in a 16-year-old boy. The operative findings are discussed.

Key words: Hernia, surgery, abdominoscrotal hydrocoele, Ethiopia

INTRODUCTION

Abdominoscrotal hydrocoele (ASH) is rare accounting for only 1.25% of all types of hydrocoeles.[1] Associated diagnoses include cryptorchidism and contralateral hernia. ASH presents as a dumbbell –shaped giant hydrocoele that occupies the scrotum and extends into the abdominal cavity through the inguinal ring with either an intraperitoneal or retroperitoneal component.[2]

CASE REPORT

A previously healthy 16-year-old boy presented to Wolaita Sodo University Teaching and Referral Hospital in January 2022 with a gradual onset over two years of a right lower abdominal and scrotal swelling associated with dull dragging pain. He had no history of fever or trauma or any other condition. On examination there was a large non-tender lump in the right iliac region extending towards the right side of the umbilicus and the right inguinal area (Figure 1). The right testis was not palpable but the left testis was normal. An ultrasound examination showed a large anechoic cystic lesion extending from the abdomen to the scrotal region through the right inguinal canal and with a right mild hydronephrosis.

Figure 1. Abdominoscrotal swelling in the right lower quadrant of the abdomen extending into the groin and scrotum.

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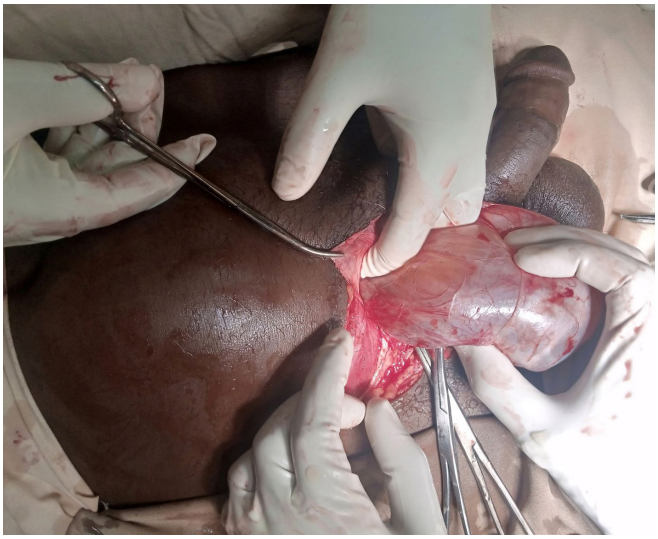

Figure 2. The right inguinal incision and dissection of the sac.

Figure 3. Extension of incision and identification of the sac.

Figure 4. Drainage of fluid from the sac

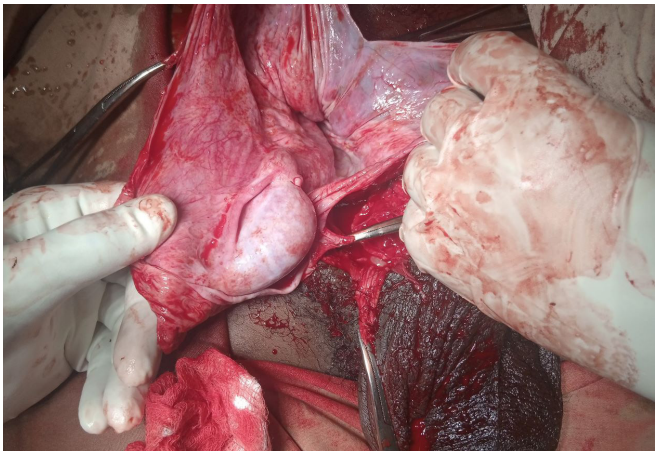

Figure 5. Excision of sac

An incision was made over the right inguinal region extended to suprapubic area about 6cm area. The tissue layers were dissected out and the dartos fascia was incised, exposing the hydrocoele. The sac was separated superiorly from the extra-peritoneal fascia and inferiorly from the scrotal wall with sharp and blunt dissection. The hydrocoele and testicle were delivered through the incision and dissected away from the spermatic cord. The hydrocoele sac was freed from the surrounding tissue with a moist sponge, clearly exposing the parietal layer of the tunica vaginalis. The hydrocoele was incised and approximately 700ml straw-coloured fluid drained.

The redundant hydrocoele sac was excised and sent for histopathological examination. The edges of the sac were everted loosely behind the testis and sutured to each other using a running 3-0 polyglycolic (Vicryl). The dartos fascia and scrotal skin were closed with running and interrupted 3-0 chromic sutures. All bleeding points were cauterized to maintain haemostasis, a drain was placed and the skin closed (Figures 2,3,4,5]. The patient tolerated the procedure well.

He was kept nil per mouth for six hours and started maintenance fluid normal saline 0.9% 1 liter every eight hours and IV antibiotics ceftriaxone 1g BID for 72 hours and analgesia with tramadol 50mg QID and diclofenac sodium 75mg IM and elevation of scrotum to reduce swelling. After 24 hours the drain was removed. On the 5th postoperative day the wound was clean and the patient was discharged from hospital.

DISCUSSION

ASH presents typically as a scrotal hydrocoele associated with an ipsilateral abdominal mass. The aetiology of ASH is not clear. A likely cause is enlargement and extension of a scrotal hydrocoele into the retroperitoneal or preperitoneal space after closure of the processus vaginalis. It has been found that the hydrocoele fluid was exudative. [1] Massive enlargement of the hydrocoele may extend into the upper abdomen and be associated with hydroureter and hydronephrosis, lower extremity oedema or even appendicitis.[1]

Brodman described a high obliteration of the processus vaginalis above the deep inguinal ring, leaving a high infantile hydrocoele.[2] However, a more widely accepted view by Dupuytren suggests that excessive intracystic pressure causes cephalad extension of a scrotal swelling through the deep inguinal ring.[2]

The diagnosis is strongly indicated from careful clinical examination. Ultrasound scanning is a useful technique defining the surgical anatomy. CT and MRI imaging, if available, would provide further information.[3,4]

The usual surgical approach is an inguinal incision with proximal dissection of the hydrocoele sac from its abdominal attachments and then distally with complete or partial mobilization.[5] Aspiration of the scrotal component may facilitate the proximal dissection.

Some surgeons advocate orchidopexy to avoid iatrogenic cryptorchidism torsion.[5] An alternative approach is via a midline abdominal incision for large bilateral cases or laparoscopic decompression of the abdominal component followed by inguinal excision to avert injury to the spermatic cord or vas deferens.[1,4,5] An abdominoscrotal hydrocoele is a collection of fluid in the tunica vaginalis, which extends from the scrotum to the abdominal cavity.[6]

CONCLUSION

Abdominoscrotal hydrocoele should be included in the differential diagnoses of an abdominal cystic mass.[7,8,9] A careful clinical examination is likely to indicate the correct cause followed by ultrasound scanning.

Conflicts of interest: Nil

Credits for images: Figure 1 Louis Marko, Figures 2, 3, 4 and 5 Dr Nikolas and Nurse Taferhu.

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