

Large tunica albuginea cyst mimicking a large hydrocele with a unique ultrasound feature

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KEY WORDS

hydrocele ▶ tunica albuginea ▶ cyst ▶ ultrasound

ABSTRACT

A 58-year-old man presented with a large left scrotal swelling suspected to be a large hydrocele, both, clinically and on initial ultrasound. However, at operation, a large *tunica albuginea* cyst was found arising from the mid anterior wall of the tunica albuginea. It was dissected, excised and edges under run. Further review of the ultrasound scan revealed a unique feature of large *tunica albuginea* cyst simulating a hydrocele.

INTRODUCTION

Benign intrascrotal lesions are classified as paratesticular and intratesticular lesions. Paratesticular lesions include hydroceles, spermatoceles, cystadenomas, varicoceles, hernias, and fibrous pseudotumors. Intratesticular lesions include testicular simple cysts, *tunica albuginea* cysts, epidermoid cysts, cystic ectasia of rete testis, intratesticular varicocele, adrenal rests, and splenogonadal fusion [1].

CASE REPORT

RK is a 58-year-old man who was referred by his general practitioner to the urology out patient clinic because of a left scrotal swelling and pain for one-year. He denied any previous operation or infection. However, his job involves carrying and loading cartons of tea in a warehouse.

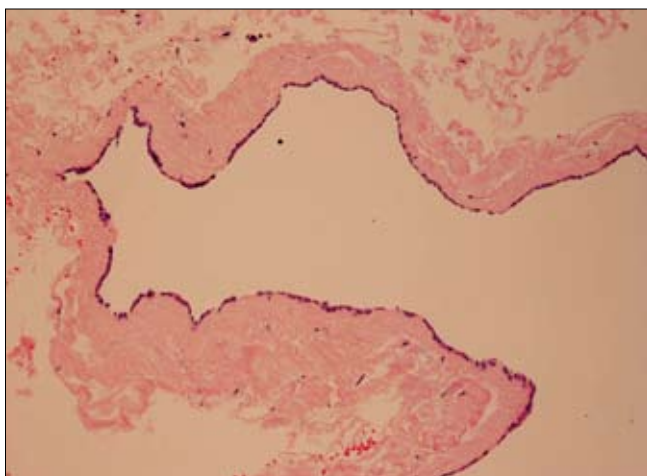


Fig. 1. Histology showing attenuated epithelium lining the fibrous cyst wall.

On examination, he was a fit looking middle-aged man. Abdominal examination revealed small, bilateral, direct inguinal hernias. Examination of the external genitalia revealed a large left scrotal swelling. The swelling was tense and cystic but not tender. It has typical signs of a hydrocele. The right testis was normal.

The report of the ultrasound scan stated that both testes were normal, with the presence of a left hydrocele about 8 cm x 6.5 cm x 4 cm.

Intraoperatively, on opening the *tunica vaginalis*, we found a cystic swelling arising from the anterior mid part of the left testis. It looked like a cyst of the epididymis, but it was not related to it or the testicular vessels. The cyst was dissected away from the visceral lining of *tunica vaginalis* and excised at the base, leaving a rim of *tunica albuginea* of about 3 mm. The edge was over run with Vicryl Rapide 3/0. The base of the cyst was about 1.5 cm, uneven and with scanty veins. The testis was returned without closing the *tunica vaginalis*. The dartos layer and skin were closed in the usual way.

Histology of the sac was reported as a thin walled cyst measuring 6.5 cm x 3 cm x 1 cm. It was lined by attenuated epithelium and the wall was fibrous (Fig. 1). The appearance was consistent with a benign tunic albuginea cyst.

Further review of the ultrasound by the radiologist revealed that the site where the cyst was attached to the *tunica albuginea* had a pattern of hyperechogenicity unlike other parts of *tunica albuginea* (Fig. 2a). In addition, there was a crescentic shadow at the lower pole where the wall of the cyst with the attached visceral layer of *tunica vaginalis* separated away from the parietal lining of *tunica vaginalis* with a trivial amount of fluid noticed at that angle (Figs. 2a, 2b).

DISCUSSION

Most studies and case reports classify cyst of the *tunica albuginea* as intra-testicular, because they point towards the parenchyma of the testis. However, there are very few reported cases of tiny tunica albuginea cysts arising from the external surface of the tunica albuginea [2-4]. Our patient had a large *tunica albuginea* cyst arising from the external surface of *tunica albuginea* and presenting as a paratesticular cyst, looking almost like a hydrocele.

The etiology of *tunica albuginea* cysts is unknown, but they are thought to be associated with trauma, hemorrhage, and infection [5]. Our patient told us that the cartons of tea he carries at the warehouse where he works often knock his testes.

Even though the wall of the cyst and attached visceral layer of *tunica vaginalis* were apposed to the parietal layer of *tunica vaginalis*, the fact that the scrotum was incised in layers helped us to separate them, otherwise if it was treated like a hydrocele it would have been a sure recipe for recurrence. This underscores the importance of following surgical principles even in minor operations.

The crescentic shadow on the lower pole of the ultrasound scan image, where the parietal layer of *tunica vaginalis* separated



Fig. 2a. Ultrasound picture showing the hyperechoic area at the base of the cyst and a faint crescentic line depicting the wall of the cyst.

from the visceral layer and the attached wall of the cyst (Figs. 2a, 2b) could be a subtle feature to differentiate vaginal hydrocele from large cyst of the *tunica albuginea*.

Acknowledgement

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REFERENCES

1. Rubenstein RA, Dogra VS, Seftel AD, Resnick MI: *Benign intra scrotal lesions*. Urol 2004; 171 (5): 1765-1772.
2. Hamm B, Fobbe F, Loy V: *Testicular cysts: Differentiation with USS and clinical findings*. Radiology 1988; 168 (1): 19-23.
3. Kromann-Andersen B, Hansen U, Iversen E, Jakobsen H: *Benign cystic lesions of the tunica albuginea*. Ann Chir Gynaecol 1987; 76 (2): 133-135.

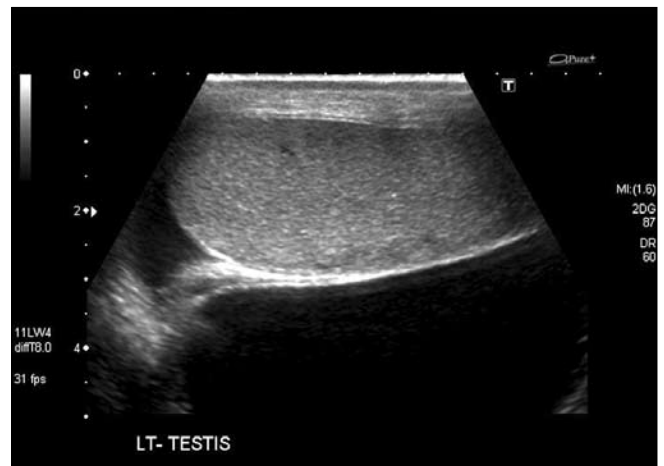


Fig. 2b. Ultrasound picture showing the cyst wall reflection near the lower pole of the left testis.

4. Kim CJ, Kushima M, Okada Y, Tomoyoshi T: *Tunica albuginea cysts associated with hydrocele testis: report of a case*. Hinyokika Kiyo 1991; 37 (9): 1065-1068.
5. Rubenstein RA, Dogra VS, Seftel AD, Resnick MI: *Benign intra scrotal lesions*. Urol 2004; 171 (5): 1768.

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