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*Case report*

# Acquired spermatic cord hydrocoele of the cord in a Ghanaian Adult: a case report

## *Hydrocèle acquise du cordon spermatique chez un adulte Ghanéen : à propos d'un cas*

John Kanyiri Yambah Kanyiri[1], Avoke Kafui Fenella[1], Victor Opoku[2], Richardson Annan[3]

**Corresponding author**
John Kanyiri Yambah
Courriel: yambahjohn@yahoo.com

**Résumé**
Les hydrocèles du cordon spermatique (HCS) sont des tumeurs testiculaires bénignes rares. Il y a peu de littérature sur sa présentation parmi les Ghanéens et les Africains. Nous rapportons ici, le cas d'un Ghanéen de 27 ans qui s'est présenté avec une masse indolore à l'aine qu'il a décrite comme une sensation de « troisième testicule plus mou » qui s'est révélée être une hydrocèle enkystée après exploration chirurgicale. La littérature actuelle sur l'hydrocèle enkystée est revue et discutée.

**Mots-clés** : Africaine, hydrocèle du cordon spermatique, hydrocèle enkystée, excision chirurgicale
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1. University Health Services, University of Education, Winneba, Winneba-Ghana
2. Department of Physician Assistantship Studies, University of Cape Coast, Cape Coast-Ghana
3. Department of Surgery, Greater Accra Regional Hospital, Accra-Ghana

**Summary**
Spermatic cord hydrocoeles (SCH) are rare benign testicular tumors. There is a paucity of literature on its presentation among Ghanaian and Africans. We contribute by reporting a case a 27-year-old Ghanaian who presented with a painless groin mass he described as feeling like a "softer third testicle' that turned out to be an encysted hydrocoele after surgical exploration. The current literature on encysted hydrocoele is reviewed with a discussion.

**Keywords**: African, encysted hydrocoele, African, Spermatic cord hydrocoele, surgical excision

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## Introduction

Spermatic Cord Hydrocoele (SCH), defined as a fluid collection in the processus vaginalis is rare (1). The burden worldwide is unknown. However some European regional studies estimated prevalence of SCH at 0.04 % and that SCH constitute as much as nearly 40 % of all hydrocoeles in Sweden (2). In Sub Saharan Africa, there are no national data on prevalence but a 3-year longitudinal hospital-based report in a tertiary centre in Ghana estimate SCH at 5.25 % of groin swellings among children (3). A recent case report in Ghana documented three cases in a single peripheral facility (4) and suggest the condition may not be so rare as previously thought. SCH arise from three related processes; complete obliteration of distal processus vaginalis; fluid entrapment and; partial or complete obliteration of the caudad extension. The mechanism of development is explained in the congenital type by disruption


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in the processes of testicular descent that begins at about 28weeks and terminates at the time of birth (1). Complete involution of the processus vaginalis usually occurs either at the time of birth or may extend to age 2 in some children (3). Acquired SCH may be secondary to trauma, infections or malignancies in adults but is usually idiopathic. There are two SCH variants (5); the funicular type which does not communicate with the tunica vaginalis but narrowly communicates with the peritoneum and the encysted type which neither communicates with the tunica vaginalis nor the peritoneum. Among children, there is no significant difference in the mean age of onset or their location in terms of whether they are predominant in the right or left hemi-scrotum (6). The equivalent pathology in females, the hydrocoele of the canal of Nuck is even more rare and is mostly misdiagnosed as an inguinal lymph node, inguinal hernia or femoral hernia. SCHs are usually painless masses and commonly mimic hernias, vaginal hydrocoeles, dermoid cysts, lymphadenopathy or testicular malignancies (7). Ultrasound imaging helps in differentiating it from other groin masses. In this report, a case of an acquired SCH in a 28-year-old man Ghanaian is described and literature reviewed.

**Case report**

A 28-year-old man presented with a right testicular swelling noticed a year ago. The swelling was painless, irreducible and slowly increased in size. The past surgical history was not significant and he had no previous swellings of such nature or groin trauma. He described the swelling as feeling like a 'softer third testicle'. General examination findings were normal. Genital examination showed a nontender, soft, fluctuant, right groin swelling. It measured 2 cm x 3 cm x 2 cm, was irreducible and felt attached to the right testicle towards the base of the testicle. It transilluminated, was freely mobile and the skin over it looked normal and was unattached to it. Both testes were normal. Inguinal lymph nodes were not palpable bilaterally. Figure 1 depicts the appearance the mass.

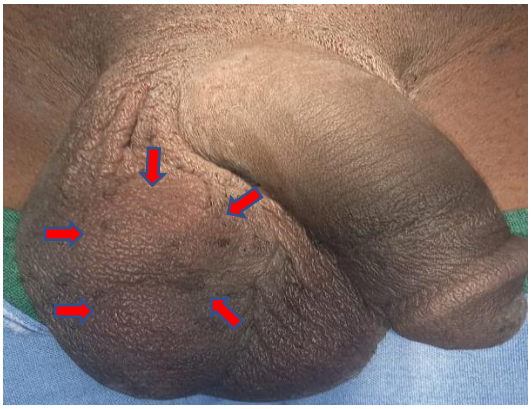

**Figure 1 : Appearance of testes with a bulge denoted by red arrows in the right hemi-scrotum above the testicle**

A groin ultrasound reported an avascular cystic lesion 3.3 cm x 2cm, adjacent to the right testicle. Groin exploratory surgery under local anesthesia revealed an encysted hydrocoele separate from the tunica vaginalis as shown in Figure 2.

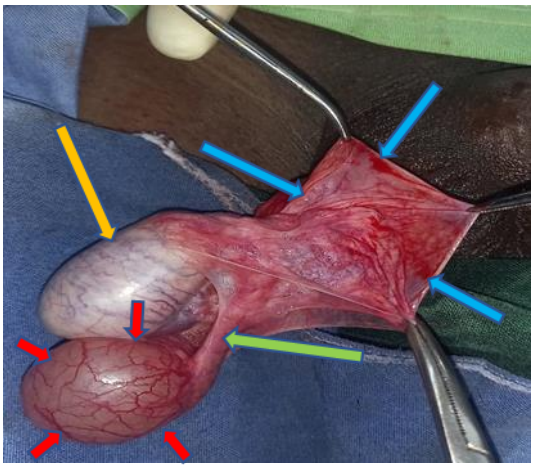

**Figure 2. Intra-operative findings showing the encysted hydrocoele (red arrows), right testicle (yellow arrow) and the tunica vaginalis (blue arrows).**

The cyst was dissected off as a unit as seen in figure 3 and sent for histopathology.

The Post-op course was uneventful and he was discharged home on analgesics and antibiotics same day. Follow up did not reveal any recurrence or complications after 3 months.


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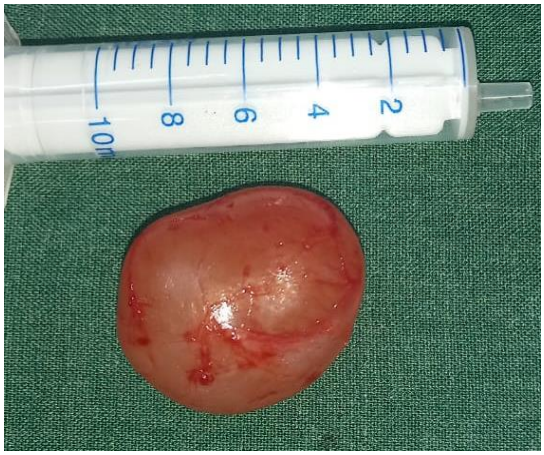

**Figure 3 : Excised fluid filled cyst**

**Discussion**

A SCH is rare with very few documented in literature among Africans. Among Ghanaian children and infants operated in a tertiary centre over a 3-year period, only 28 cases were encountered (3). In adults, aside one case of SCH in Nigeria (7) and three cases in Ghana (4), their presentation in Africans is scantily documented in literature and the burden may be higher due to their association with lymphatic filariasis. In children they are mostly congenital arising abnormalities of testicular embryologic descent(5). They are associated with prematurity, undescended testes, developmental dysplasia of the hip and Ehlers-Danlos syndrome (1). SCH in children may spontaneously resolve before 2 years (3,5), persist into adulthood or arise from infections, trauma or malignancies. However, in majority of reported cases, no direct cause is found for their occurrence.

Regarding symptomatology, the presentation in the current case report is similar to others (5,8) where they were painless. However, they can present with dull ache or pain in the scrotum (7,9). Pain from SCH can be severe enough to warrant a suspicion of an incarcerated inguinal hernia or testicular torsion (10-11). As a result of proximity to the testicle and a comparable size with the testicle, SCH may be thought to be a new third testicle (12) as described by the patient in this case report. A hydrocoele of the canal of nuck (3), its equivalent pathology in females is even rarer compared with SCH. There are two types. The funicular type may reduce into the abdomen or even be demonstrate a visible or palpable cough impulse or increased intra-abdominal (1,11). The only difference from an indirect hernia being absence of intraabdominal content in the sac. The latter scenario makes distinguishing it from an indirect hernia difficult. The encysted variety, is usually confused with a testicular malignancy, hematocoele, lipoma, teratomas or polyorchidisms.

Diagnosis of SCH via imaging may be fairly accurate with an ultrasound which would describe an anechoic cystic mass distinguishable from the testicle and traceable to the internal ring in the case of the funicular type (1,8) or simple anechoic cystic mass separate from the tunica vaginalis.

Exploratory groin surgery serves to both to confirm diagnosis and concurrently manage SCH (7,11). Typical findings of the encysted variety are a cyst in the cord and the tunica vaginalis with no communication between the two as seen in Figure 2. Total excision akin to what was carried out is usually recommended in the case of the encysted type (5,11). The funicular type is usually repaired by herniotomy (3,5). Because of the possibility of a malignancy especially in acquired SCH the resected hydrocoele was sent for histology which revealed a mesothelial lined cyst diagnostic of an encysted hydrocoele (5,13).

**Conclusion**

An acquired SCH should be entertained as a differential diagnosis when there is a new onset, painless and soft testicular swelling of comparable size with the testicle. Surgical exploration confirms the diagnosis and allows for total excision which is curative of the encysted type. A histopathology may be necessary to exclude malignancy and other differential diagnosis.

**Consent to publication**

The authors obtained a written informed consent from the patient for the publication of this report and any applicable materials. A copy of the consent form is available for review upon request.


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**Competing interests**
The authors declare that they have no competing interests.

**Authors' contributions**
JKY and FKA were involved in the concept design for the manuscript, manuscript preparation, and revision. VO and RA reviewed. All authors approved the finalized version of the manuscript. They were also involved in the management of the patient.

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