

# Acquired Encysted Hydrocele of the Cord Secondary to Trauma in a Child: Sonological Appearances of a Rare Entity

Reddy Ravikanth\*

Department of Radiology, St. John's Hospital, Idukki, Kerala, India

Dear Editor,

A 5-year-old boy presented with left groin pain and swelling of approximately size measuring 2.0 cm × 1.0 cm which developed secondary to trauma to the groin region while playing. The swelling was progressively increased in size for the past 10 days. Clinically, the swelling was tender and the child was referred for ultrasonography which demonstrated a well-circumscribed ovoid cystic lesion measuring 2.0 cm × 1.0 cm with scattered echoes and few internal septations in the left inguinal region [Figure 1a]. The cystic lesion was separately visualized from the left testis with no communication with the intraperitoneal cavity, and color Doppler demonstrated an avascular cystic lesion which is superior to and away from the left testis [Figure 1b and c]. A sonological diagnosis of acquired encysted hydrocele of the spermatic cord was made, and the child referred to the department of general surgery for further management. Acquired hydrocele of the scrotum may be reactionary secondary to trauma, infection, or tumors.<sup>[1]</sup> However, acquired encysted hydroceles of the spermatic cord have not been reported in the literature till date. Minimal amount of the fluid present between the parietal and visceral layers of the tunica vaginalis is physiological and normal. Acquired hydrocele may be idiopathic and results from failure of reabsorption of fluid by the mesothelial lining or due to excessive fluid production.<sup>[2]</sup> Spermatic cord hydrocele has been classified into three types: communicating, funicular, and encysted.<sup>[3]</sup> Complete patency of the embryological processus vaginalis results in the formation of a communicating hydrocele. On ultrasonography, communicating type presents as a fluid collection extending from the pelvis through the deep inguinal ring to the scrotum. Funicular type of hydrocele results from undue obliteration of the deep inguinal ring, with constriction just above the testis. On ultrasonography, funicular type resembles a peritoneal diverticulum and presents as a

fluid collection that communicates with the peritoneum at the deep inguinal ring. However, the funicular type does not surround the testicle and shows variations in shape or size with changes in intra-abdominal pressure. Encysted hydrocele may be located anywhere along the entire length of spermatic cord, and the entity does not show variations in shape or size with changes in increased intra-abdominal pressure. Causes of nonclosure of the processus vaginalis, leading to hydrocele of the spermatic cord, are prematurity, developmental dysplasia of the hip, Ehlers–Danlos syndrome, cystic fibrosis, peritoneal dialysis, or ventriculoperitoneal shunt.<sup>[4]</sup> Differential diagnosis of inguinoscrotal lesions in children includes undescended testis, spermatic cord hydrocele, torsion of the testis or a testicular appendage, hematoceles, vasitis, epididymitis, inguinal lymphadenitis, and rare testicular and spermatic cord tumors.<sup>[5]</sup> This letter describes the sonological appearance of an acquired encysted hydrocele of the cord and stresses on the fact that the entity needs to be included in the differential diagnosis of inguinoscrotal swellings, especially in the pediatric age group.

## Declaration of patient consent

The author certifies that he has obtained all appropriate patient consent forms. In the form the patient's guardian has given the consent for the images and other clinical information to be reported in the journal. The guardian understands that the child's name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

**Address for correspondence:** Dr. Reddy Ravikanth,  
Department of Radiology, St. John's Hospital, Kattappana,  
Idukki - 685 515, Kerala, India.  
E-mail: ravikanthreddy06@gmail.com

Received: 09-05-2020 Revised: 30-06-2020 Accepted: 06-07-2020 Available Online: 01-10-2020

### Access this article online

Quick Response Code:



Website:  
www.jmuonline.org

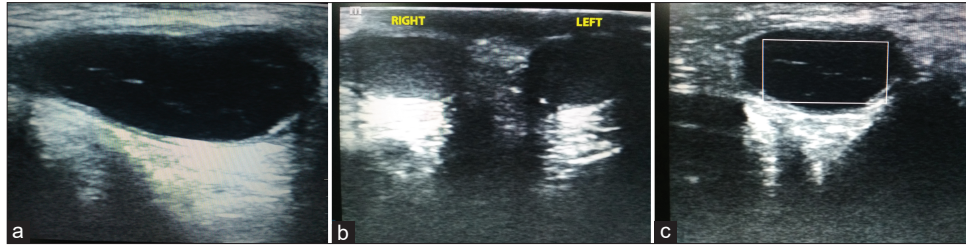
DOI:  
10.4103/JMU.JMU\_73\_20

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** WKHLRPMedknow\_reprints@wolterskluwer.com

**How to cite this article:** Ravikanth R. Acquired encysted hydrocele of the cord secondary to trauma in a child: Sonological appearances of a rare entity. *J Med Ultrasound* 2022;30:65-6.

© 2020 Journal of Medical Ultrasound | Published by Wolters Kluwer - Medknow



**Figure 1:** (a) Longitudinal ultrasonographic image demonstrating a well-circumscribed ovoid cystic lesion in the left inguinal region along the spermatic cord, suggesting a diagnosis of encysted spermatic cord hydrocele. (b) Transverse ultrasonography color Doppler image demonstrating scattered echoes and few internal septations with absent internal vascularity within the lesion. (c) Transverse ultrasonographic image demonstrating bilateral testes which are separately visualized from the cystic lesion in the left inguinal region which is superior to and away from the left testis

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

### REFERENCES

- Garriga V, Serrano A, Marin A, Medrano S, Roson N, Pruna X. US of the tunica vaginalis testis: Anatomic relationships and pathologic conditions. *Radiographics* 2009;29:2017-32.
- Palmer LS. Hernias and hydroceles. *Pediatr Rev* 2013;34:457-64.
- Martin LC, Share JC, Peters C, Atala A. Hydrocele of the spermatic cord: Embryology and ultrasonographic appearance. *Pediatr Radiol* 1996;26:528-30.
- Rathaus V, Konen O, Shapiro M, Lazar L, Grunebaum M, Werner M. Ultrasound features of spermatic cord hydrocele in children. *Br J Radiol* 2001;74:818-20.
- Rafailidis V, Varelas S, Apostolopoulou F, Rafailidis D. Nonobliteration of the processus vaginalis. Sonography of related abnormalities in children. *J Ultrasound Med* 2016;35:805-18.