

Enlarged Scrotum, an Unusual cause - Eggshell Calcification of Hydrocele on Lt with Inguino-scrotal hernia and encysted hydrocele on Rt side, Imaging of a case & review

*Pranav Kumar Dave¹ Vivek Gupta², R Mishra³, M Jain⁴, M Bapat⁵, R Tapadia⁶
P Chouhan⁶, P Rajpali⁶, M Tilgam⁶, P Gupta⁶, A Patidar⁶, Q Ali⁷, K Anand⁸ S
Sharma⁹ Asso. Prof¹, Prof^{2,3}, Prof & HOD⁴, Asst. Prof⁵, Resident⁶,
Department of Radio diagnosis, Prof of Surgery & Urologist⁷, Prof & HOD of
Surgery⁸, Prof of Surgery⁹

L N Medical College and J K Hospital, Kolar Road, Bhopal-462042, MP, India.

*¹ Corresponding author: Dr Pranav K Dave, Asso. Prof. Deptt. Of Radiology,
E-7/540, MIG Senior, Area Colony, Bhopal-462016, MP, India.

Abstract: Scrotal swellings are common in all age groups representing various causes. In older age scrotal swelling may be due to herniation, hydrocele or testicular tumor. Calcification of walls of hydrocele is not very commonly seen, its hard consistency mimics neoplastic nature. Evaluation with radiography, scrotal sonography and CT findings, diagnosis is confirmed pre operatively and prevents over surgery.

Keywords: - Hydrocele Wall Calcification, Eggshell Calcification, Scrotal swelling, Scrotal Ultrasonography SU, CT Scrotum

Date of Submission: 10-12-2019

Date of Acceptance: 25-12-2019

I. Introduction

The commonest cause of scrotal swelling is a hydrocele, an abnormal fluid collection between parietal and visceral layers of the tunica vaginalis in all age groups. Hydrocele may be idiopathic / primary without predisposing any lesion or secondary due to inflammation of epididymis, epididymo-orchitis, testicular tumor, trauma, surgical operation, torsion or infarction¹. In untreated, neglected, long-standing cases of hydrocele may result in calcification of the tunica vaginalis. Calcification of hydrocele sac / wall is a rare^{2,3,4}. Kickham CJE published the case of " Calcified hydrocele of the tunica vaginalis testis: case report" in 1935. He reported 15 cc milky fluid in Hydrocele sac and calcified wall of Hydrocele sac⁵. Our reported case is rare case of eggshell calcification of chronic hydrocele on left side and encysted hydrocele with inguinoscrotal herniation of intestine on Rt side.

II. Case Report

A 85 year old male presented with enlarged scrotum and difficulty in passing urine. Scrotal swelling was first noticed on left side for 10 years duration and swelling on right side of scrotum for 2 years duration (Figure-1). There was difficulty in passing urine since 5 years. There was no history of trauma or surgery of scrotum. Physical examination revealed swelling on both sides of scrotum, large firm on right side with positive cough reflex and hard in consistency, non-tender on left side. Both testicles were difficult to palpate separately from the swelling. There was no cough impulse on left, while the size of swelling increases with coughing on right side. Per rectal examination revealed firm enlarged prostate. He was referred for imaging work up. Radiograph chest was unremarkable, Plain radiograph of pelvis revealed soft opacity with dense peripheral calcification on left and soft tissue haziness on right side of scrotum (Figure 2-3). SU showed a well defined anechoic cystic lesion measuring 6x5 cm size with herniation of intestine with defect of 4 cm, in right hemiscrotum. This swelling shows positive cough impulse. A well defined complicated hypoechoic cystic lesion with internal echoes and intense hyperechoic wall causing posterior acoustic shadowing, representing eggshell / wall calcification, measuring 4.9x3.2 cm size seen in left hemiscrotum. Both testes were displaced posteroinferiorly, however echo texture was normal. There was no abnormal blood flow (Figure 3-8). Ultrasound Abdomen and pelvis findings were of enlarged prostate with normal echo texture and significant PVR suggestive of benign enlargement of prostate. No obvious lymphadenopathy was seen. CT scan confirmed a well defined fluid density cystic lesion 20-30 HU with peripheral calcification 90 HU in left hemiscrotum. A

well defined fluid density cystic lesion 20-30 HU with focal peripheral calcification and herniation of intestine in right hemi scrotum (Figure 9-12).

III. Discussion

Hydrocele is result of abnormal collection of serous fluid in between two layers of tunica vaginalis, due to either excessive secretion or because of poor absorption of fluid. Calcification of hydrocele sac is rare. Exact etiology of calcification of hydrocele sac is not known, Could be secondary to chronic irritation^{6,7} trauma and infectious diseases including Schistosoma Haematobium⁸. Hydrocele and extra testicular calcifications have been reported in tuberculous epididymo-orchitis⁹. Goel et al reported calcification of tunica vaginalis in a case of long standing hydrocele from a geographic area where filariasis is endemic and stated that recurring attacks of epididymo-orchitis resulting from filariasis might have led to hydrocele formation⁶. Koh et al reported a case of chronic hematocele with calcification of the tunica vaginalis which was demonstrated by SU as a calcified shell in a 65-years old male who had a history of trauma¹⁰. Numa et al reported in a 58-years old man a giant chronic hydrocele with a thick hydrocele sac, containing dark brown pus in which histological examination revealed calcification in the tunica vaginalis and extremely atrophic testes¹¹. Kokotas et al reported a 72 years old male patient in whom they ablated thick, hardened and calcified tunica vaginalis and evacuated a considerable amount of yellow fluid⁴. Kokotas et al stated that calcification was probably due to chronic irritation of the wall in the coexisting hydrocele. There was no clinical, radiological or pathological findings suggestive of tuberculosis, no history of trauma and case was not from endemic zone of filariasis in our case. Long standing history of hydrocele in our case resulted in eggshell calcification of walls of hydrocele on left side and focal calcification of hydrocele wall on Rt side. Enlarged prostate due to BPH and weakness of abdominal wall due to old age resulted in inguinoscrotal herniation of intestine on right side with a encysted hydrocele. SU is first choice of investigation for any scrotal swelling to differentiate testicular lesion from extra testicular pathology. Calcification of wall may obscure the details of underlying pathology. Our case had complete encircling calcification the walls on left side with displaced left testes postero inferiorly. While on right side revealed herniation of intestine up to scrotum with a well defined anechoic cystic lesion causing displacement of right testes postero inferiorly and small focal wall calcification of hydrocele sac. This focal calcification of wall could not be appreciated on SU, however which was detected on CT scrotum and confirm other findings of SU.

IV. Conclusion:

Our findings indicate that sonography has high specificity but good sensitivity in evaluation of scrotum swelling. Calcification of walls of hydrocele is rare. Radiographic findings can be confirmed on CT in case of eggshell calcification of long standing complicated or infected hydrocele. SU, CT are valuable in differentiating other pathology of testis like testicular malignancy which may mimic on clinical examination due to hardness of calcified walls of hydrocele. Surgical excision of calcified hydrocele sac and repair of hernia is the treatment of choice. However our patient refused to undergo cytology and surgery.

References

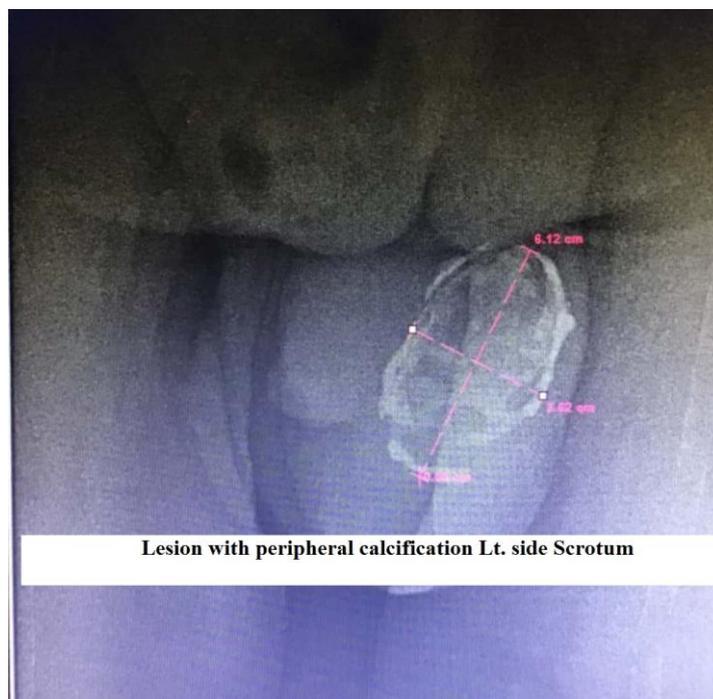
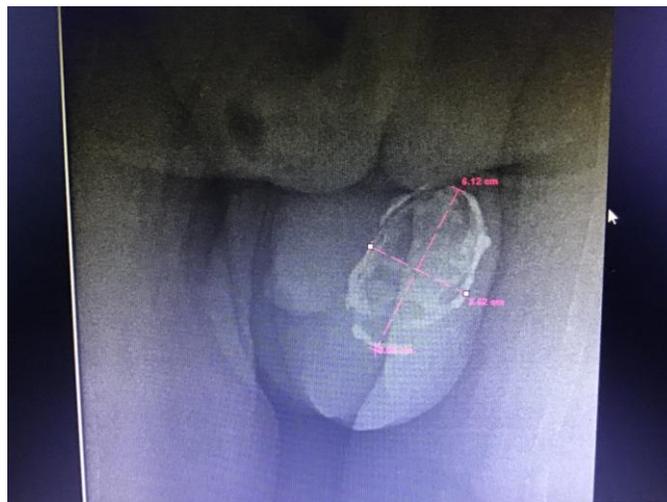
- [1]. Aliper Dilli, Umit Y A Osman R K Hikmet T Demet Y Baki H. Chronic complicated hydrocele with eggshell calcification: A case report. *Clin Exp Med Lett*, 2011; 52(1-2): 79-82.
- [2]. Barolia DK, Gupta SP, Sethi D et al. Eggshell Calcification of Hydrocele Sac- A Rare Case. *Int J Health Sci. Res.* 2016; 6(3): 305-307.
- [3]. Virseda Rodriguez JA, Hernandez Millan, I, Segura Martin M: Calcification of the tunica vaginalis. *Arch Esp Urol.* 1997; 50: 406-7.
- [4]. Kokotas n, Kontogeorgos I, Kyriakidis A: calcification of the tunica vaginalis, *Br J Urol.* 1983; 55: 128.
- [5]. Kickham CJE. Calcified hydrocele of the tunica vaginalis testis: case report. *New Engl J Med* 1935; 212(10): 419.
- [6]. Goel A, Singh V, Dalela D. Calcification of the tunica vaginalis in a case of longstanding hydrocele. *Urology*, 2007; 70: 1006.
- [7]. Bushby LH, Miller FNAC, Rosario S, Clarke JL, Sindhu PS. Scrotal calcification : Ultrasound appearances, distribution and aetiology. *B J Radiol.* 2002; 75: 283-288.
- [8]. Mohammed AZ, Edino ST, Samaila AA, Surgical pathology of schistosomiasis. *J Natl Med Assoc.* 2007; 99: 570-574.
- [9]. Chung JJ, Kim MJ, Lee T et al. Sonographic findings in tuberculous epididymitis and epididymo-orchitis. *J Clin Ultrasound.* 1997; 25: 390-94.
- [10]. Koh F, Kondoh N, Kiyohara H et al: A case of chronic huge hematocele. *Hinyokika Kyo.* 1989; 35: 1421-24.
- [11]. Numa H, Sakamoto S, Itoh H et al: A case of giant hydrocele testis. *Hinyokika Kyo.* 1987; 33: 1500-2.

Source of Support: Nil

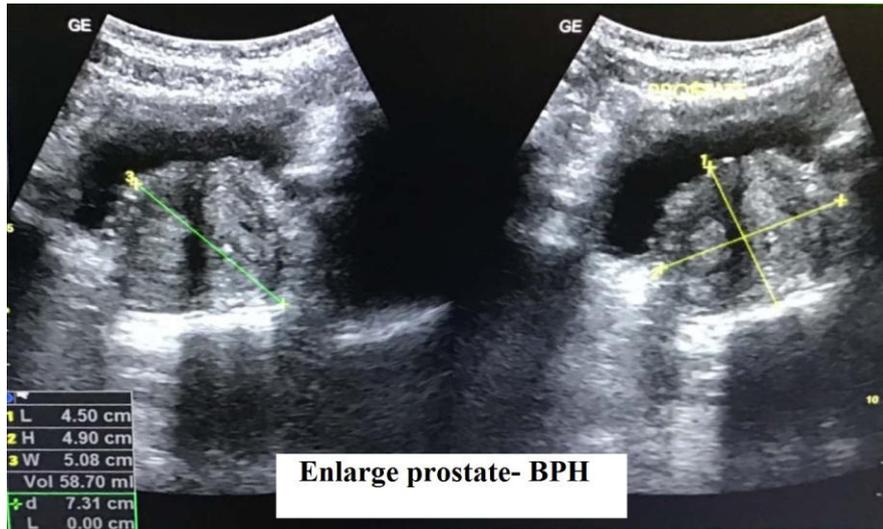
Conflict of Interest : None declared



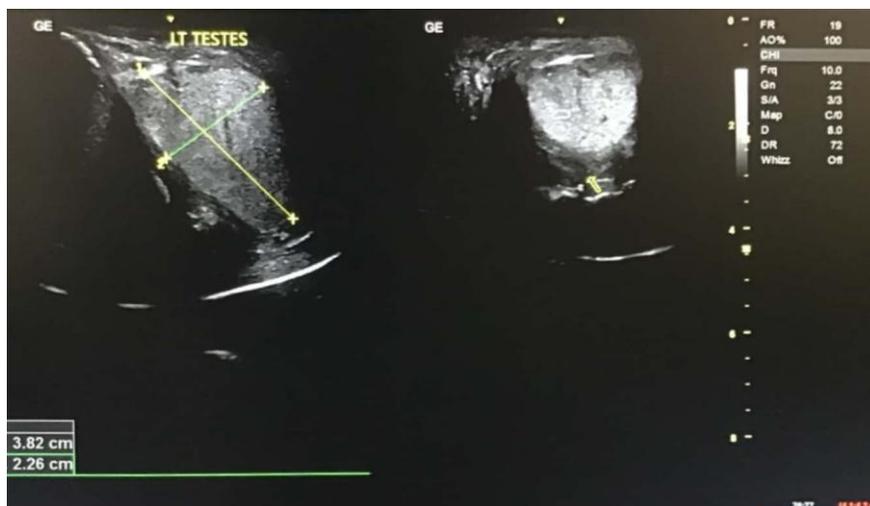
Rt. inguinoscrotal & Lt. Scrotal swelling



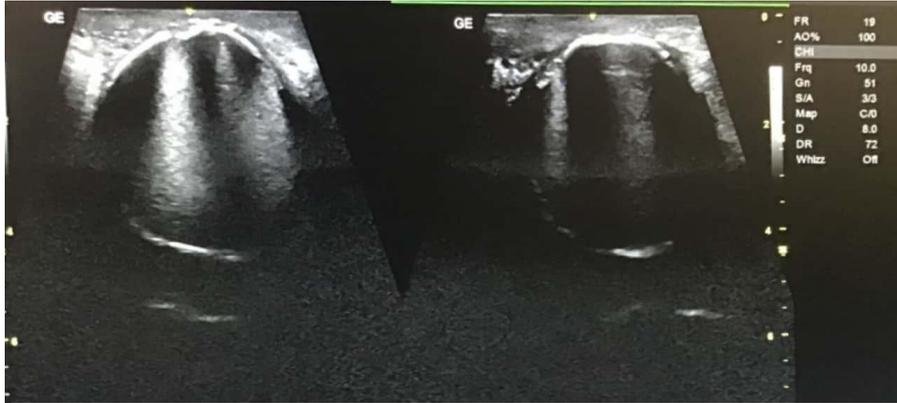
Lesion with peripheral calcification Lt. side Scrotum



Displaced right testicle with hydrocele

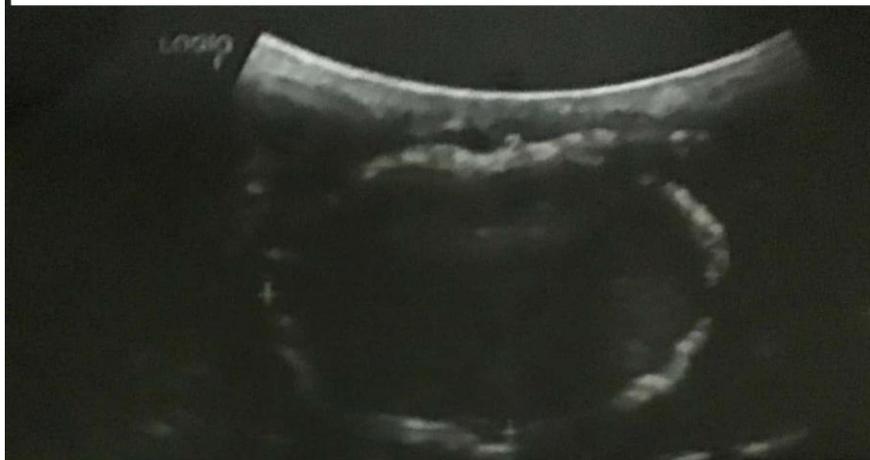


Displaced left testicle with hydrocele



SU-Lesion with periferal calcification with PAS

SU- Hyperechoic peripheral lesion Lt. Scrotum

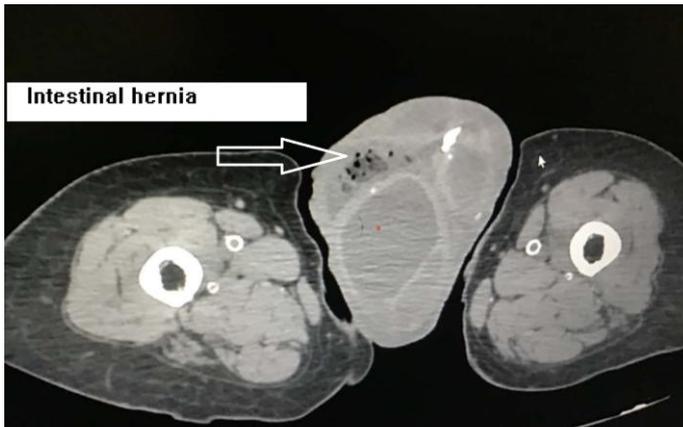


CT- Intestinal herniation & encysted hydrocele with focal peripheral calcification

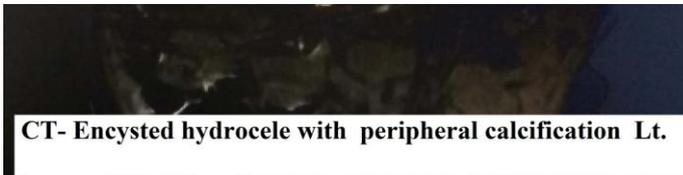
CT- Rt. Encysted hydrocele



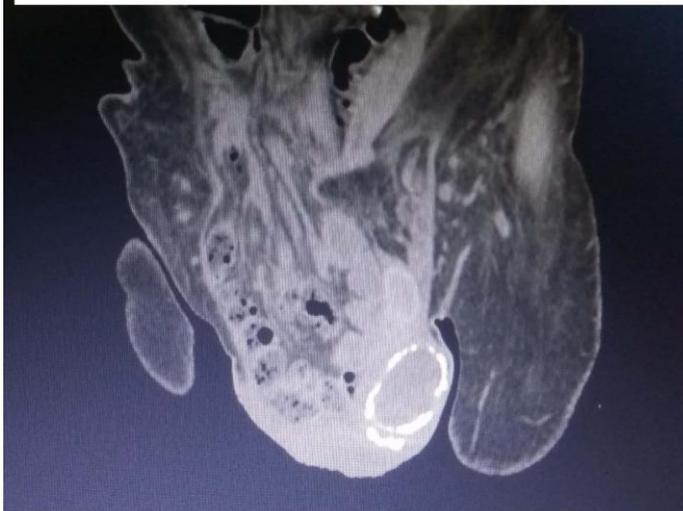
Intestinal hernia

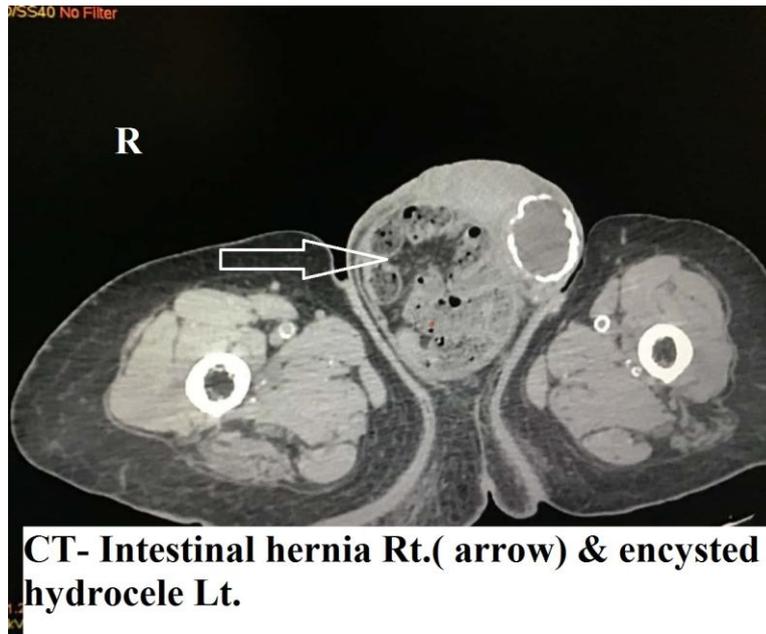


CT-B/L Encysted hydrocele with wall calcification



CT- Encysted hydrocele with peripheral calcification Lt.





Dr Pranav K Dave. "Enlarged Scrotum, an Unusual cause - Eggshell Calcification of Hydrocele on Lt with Inguino-scrotal hernia and encysted hydrocele on Rt side, Imaging of a case & review". IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 12, 2019, pp 07-13.