

Hydrocele of Canal of Nuck in Adult Females

- A series of two cases



Dr D S Malik
Director – General & Laparoscopic Surgery

Dr Mahipal Singh
Director - Radiology

Dr Nisha Aurora
Senior Consultant - Radiology

Dr B S Dhakad
Senior Medical Officer

Eternal Hospital Jaipur

INTRODUCTION:

- The canal of Nuck was first described by the Dutch anatomist Anton Nuck in 1691.
- The processus vaginalis within the inguinal canal in women is called the canal of Nuck.
- The Hydrocele of the canal of Nuck is a very rare condition and results from the failure of obliteration of the distal portion of the canal which forms a fluid containing sac.
- It is homologous to a patent processus vaginalis in males which also predisposes to indirect inguinal hernias and hydroceles and cysts of the spermatic cord.
- Hydrocele of the canal of Nuck is a rare entity in clinical practice and is an unusual diagnosis with only about 400 reported cases.

PATHOPHYSIOLOGY:

- When the secretion and absorption of fluid become unbalanced in the secretory membrane on the inner wall, hydrocele of the canal of Nuck occurs due to swelling of the pouch.
- The hypersecretion and malabsorption of the secretory membrane can be caused by infection, injury, or inappropriate lymphatic drainage, the latter of which is usually multiple.

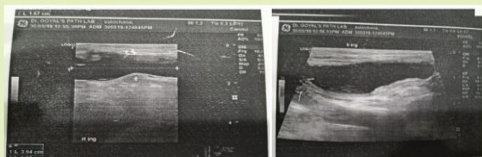
CASE REPORT: 1

A 42-year-old female presented with complaint of pain and swelling in bilateral inguinal region for last 3 months. Swellings were insidious in onset, with a slight increase in the size of the swelling since its occurrence. There was no history of other GI or Urological symptoms

- On examination, an oval, approximately 2 x 2 cm in size, tender, cystic swelling was present in the right inguinal region.
- Another swelling about 1.5x1 cm size was present in left inguinal region which was also slightly tender and cystic.
- Trans-illumination test was negative.
- Swellings were irreducible against manual pressure. There was no expansile cough impulse
- Signs of inflammation were absent. Lymph nodal examination was normal.

INVESTIGATIONS:

USG Abdomen showed lobulated thick walled cystic lesions in B/L inguinal regions suggestive of Lymphangioma or Round Ligament cysts.



MRI showed lobulated tubular fluid signal intensity lesions in left pelvic inguino-labial and right inguino-labial regions extending along the round ligament suggestive of hydrocele of canal of Nuck / mesothelial cyst of the round ligament.



OPERATIVE PROCEDURE:

Open excision of the cyst of canal of Nuck has been the standard of care, however laparoscopic excision has been reported in the literature.

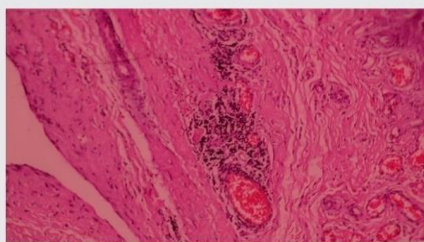
Laparoscopic excision of bilateral hydrocele of canal of Nuck was performed in this case and mesh was applied (TAPP)

OPERATIVE PHOTOS:



HISTOPATHOLOGY:

Histopathology report showed loose connective tissue with mesothelial lining with mild chronic inflammatory infiltrate, congestion of blood vessels and fibrosis suggestive of B/L hydrocele of canal of nuck.



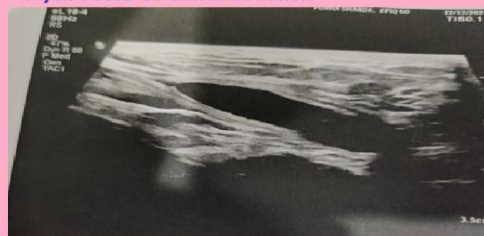
CASE REPORT: 2

A 35 year old lady presented in OPD with swelling left Inguino-labial region for last 4-5 months. Earlier 2ml fluid was aspirated from it for FNAC. There is no history of DM, HT or any cardiac ailment. She is a known case of Hyperthyroidism.

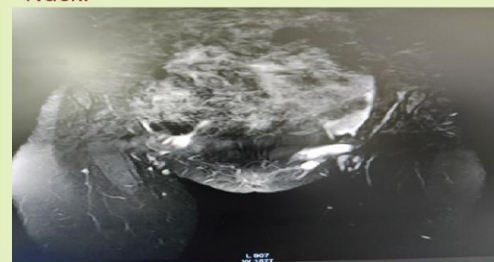
- On examination it was a diffuse (not very prominent because size has reduced after aspiration) cystic swelling in left inguino-labial region.
- It was not tender.
- Signs of inflammation were absent. Lymph nodal examination was normal.

INVESTIGATIONS:

USG showed left sided inguinal cystic mass of 1.6x0.8cm size with clear fluid inside and no communication with the peritoneum. There was no change with the Valsalva maneuver. Most likely Hydrocele of canal of Nuck



- FNAC** shows average cellular smear predominantly acellular necrotic material along with cyst macrophages and inflammatory cells- suggestive of cystic nature of swelling.
- MRI** Pelvis showed fluid in the inguinal canal from deep to superficial inguinal ring- possibility of Hydrocele of canal of Nuck.



OPERATIVE PROCEDURE

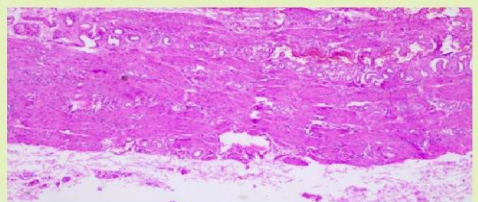
Laparoscopic excision of Hydrocele of canal of Nuck along with mesh repair was done

OPERATIVE PHOTOS:



HISTOPATHOLOGY:

Histopathology showed loose connective tissue with congested blood vessels and denuded ill defined mesothelial lining. Focal mild chronic infiltrate, fibrosis and edema suggestive of Hydrocele of canal of Nuck



CONCLUSION:

A hydrocele of the canal of nuck, although rare, it should be considered in the differential diagnosis in a case of inguino-labial swelling

The treatment of choice for hydrocele of canal of Nuck is complete surgical excision.

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