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### Case Report

## HYDATID CYST OF SPERMATIC CORD A CASE REPORT

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### ABSTRACT

Hydatid disease is world-wide in distribution but it is more common in sheep and cattle- raising countries. The disease is generally acquired during childhood though it does not manifest before adult life. It may involve any organ of the body but majority of hydatid cysts occur in the liver. However, primary involvement of the spermatic cord is exceptional. Implantation of the hydatid larva is essentially haematogenous. The purpose of this study is to present a case of hydatid cyst in an uncommon location.

**Keywords:** Hydatid Cyst, Scolices, hooklets, Spermatic Cord, Echinococcosis.

### INTRODUCTION

**Echinococcosis**, also known as **hydatid disease**, is a parasitic disease that affects both humans and other mammals, such as sheep, goat, cattle, pig and horse. Hydatid disease has been recognised since ancient times. The adult worm was discovered by Hartmann in 1695 and the larval form by Goeze in 1782. It is most commonly found in those countries where sheep and cattle-raising constitutes an important industry and consequently, there is a close association between man, sheep and dog<sup>1</sup>. Although majority of organs can be affected by hydatid disease, more than 90% of human hydatid cysts are located in the liver and lungs<sup>3</sup>. Man harbours the larval form and not the adult worm, which is found in the small intestine of dog and other canine animals such as wolf, fox and jackal<sup>1</sup>. The dog and sheep are optimum definitive and intermediate hosts respectively and the cycle of transmission is maintained between them. Since dog has no access to hydatid cyst developed in viscera of man, therefore, the life cycle of the parasite comes to a dead end. The larval form is found within the hydatid cyst developing inside the intermediate host. The scolex of the future adult worm remains invaginated within a vesicular body. On entering the definitive host, the scolex with four suckers and rostellar hooklets, exvaginates and develops into an adult worm which measures 3 to 6 mm in length<sup>2</sup>. Hydatid cyst of the spermatic cord is exceptional with only a few cases reported in the medical literature<sup>3-6</sup>.

### CASE REPORT

We received a surgical specimen of a 61-year-old male with nine months history of left inguino-scrotal swelling for histopathological examination. The surgeon suspected a neoplastic lesion. The requisition form mentioned that the swelling had gradually increased in size and moved with cough. There was no history of fever or urinary symptoms. Gross examination revealed specimen of testis, epididymis and spermatic cord altogether measuring 8x4x2 cms size. The cut surface revealed multiple cysts of varying sizes. Microscopic examination revealed hydatid cyst having laminated hyaline ectocyst and endocyst with scolices on H&E stain (Fig.1). The patient was regularly followed up for few years for any recurrence.

### DISCUSSION

Echinococcosis is a very cosmopolitan anthroponosis, common in rural areas, predominantly in North Africa, some countries of the Mediterranean basin, New Zealand, Australia, Asia, and America<sup>7</sup>. Hydatid cyst of the spermatic cord is exceptional. The first case was described by Chandra Dutt in 1951<sup>3</sup>. Since then, only a few cases have been reported in the medical literature<sup>4-6</sup>.

The mechanisms underlying the homing of the parasite at this location are still poorly understood, but it appears that early hematogenous spread by hexacanth embryos is the most

plausible hypothesis<sup>5</sup>. Clinical manifestation of hydatid cyst of spermatic cord as an inguinal swelling which is mobile, painless, variable in size and is considered in the differential diagnosis of other causes of inguinal masses, namely hernia, encysted hydrocele of the spermatic cord cyst & lymphangioma of spermatic cord<sup>5,6</sup>.

The diagnosis of hydatid cyst of spermatic cord is often suspected intraoperatively but is confirmed after histopathological examination<sup>5,6</sup>. Macroscopic examination usually shows multiple cysts of varying diameters, ranging from 4 to 5 cm<sup>5,6</sup>. On microscopic examination, the cyst has two membranes joined to one another. Outer cuticular layer or ectocyst is a concentric laminated, hyaline membrane and shows Periodic Acid Schiff positivity. The inner germinal layer or endocyst is often difficult to see and consists of a number of nuclei embedded in a protoplasmic mass. It is the vital layer of the cyst and gives rise to brood capsules with scolices and secretes specific type of hydatid fluid. Peripherally, the cyst is surrounded by a shell or pericyst which does not form any organic part of the true cyst. It is non-parasitic and made up of fibro-connective tissue rich in neovessels<sup>1,8</sup>.

Treatment of the disease is conservative surgery, preserving the testicular vasculature and maintaining a functional vas deferens. In this case the surgeons suspected a neoplastic lesion, so they removed testis along with spermatic cord.

### CONCLUSION

Hydatid cyst of spermatic cord is a rare disease and should be kept in differential diagnosis of an inguino-scrotal swelling. It is better not to biopsy the lesion if one suspects that it could be a hydatid cyst and should be excised totally to avoid recurrence. Histopathology plays an important role in

confirming the disease. Late complications which should be kept in mind are local recurrence of the disease and development of hydatidosis at the other sites. Therefore, the patient should be regularly followed up.

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Figure 1: Photomicrograph of hydatid cyst revealing laminated hyaline ectocyst and endocyst (H&E 100X)

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