

# Epidermoid Cyst of the Testis Misdiagnosed as a Hydrocele: A Case Report

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## Abstract

We present a case of a 63 years old patient who presented with a slow-growing, painless testicular swelling clinically diagnosed as a hydrocele. The patient underwent elective hydrocele repair, where it became apparent that the diagnosis of a hydrocele was incorrect. On incision of the presumed hydrocele sac, a caseous material was encountered and no obvious healthy testicle was apparent. An orchidectomy was performed and pathological assessment revealed the lesion to be an epidermoid cyst; a rare benign lesion of the testicle that clinicians should consider when assessing scrotal swellings.

**Keywords:** Epidermoid cyst; Hydrocele; Orchidectomy

## Introduction

Benign epidermoid cysts account for around 2% of all testicular tumours. Identified in 1942 their etiology still remains to be confirmed [1]. Although well documented in the literature, this rare lesion may not be considered by clinicians assessing a scrotal lump. This case report illustrates how an epidermoid cyst may be misdiagnosed as a hydrocele on clinical assessment only. It is hoped this case report will inform

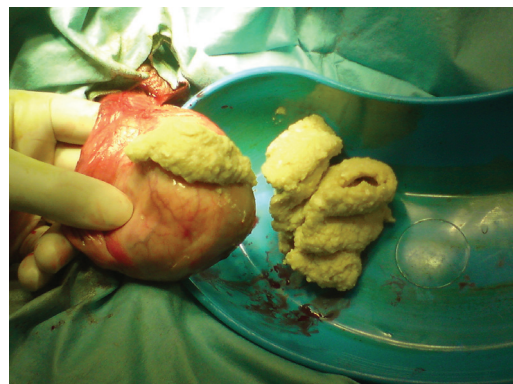
clinicians about this rare tumour and illustrate the need for ultra-sound assessment of lumps before surgical treatment.

## Case Report

A 63 years old male presented with a five year history of a slowly enlarging, painless swelling of the left testis. He had been seen in urology clinic one year previously and diagnosed clinically as having a hydrocele. Due to the size of the swelling and associated discomfort the patient now wished to be considered for surgery. Once again clinical examination found a large, lax, soft, non-tender swelling confined to the scrotum. The patient was counselled and scheduled to undergo a hydrocele repair as a day-case procedure.

The procedure was performed under general anaesthetic. The “hydrocele sac” was delivered through a midline scrotal incision. Incision of the presumed tunica vaginalis revealed it to contain green caseous material (Fig. 1). It was not possible intra-operatively to define a healthy or viable testicle separate from the mass. The patient had a normal sized contra-lateral testicle and the decision was taken to perform an orchidectomy. The specimen was sent for pathological assessment.

The specimen consisted of a testicular mass, 110 mm



**Figure 1.** The incised testicular lesion revealed a caseous material. Pathological assessment revealed the lesion to be an epidermoid cyst.

Manuscript accepted for publication July 1, 2010

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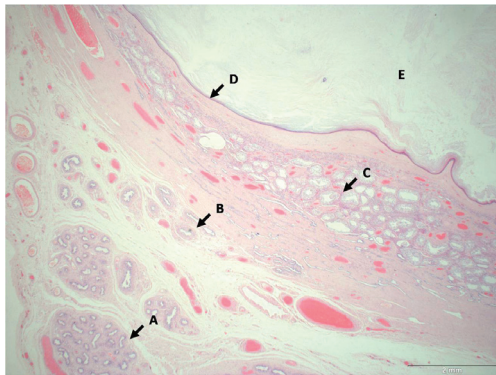
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doi:10.4021/jmc2010.07.109e



**Figure 2.** x10 magnification of the H & E stained epidermoid cyst. A: Epididymis; B: Rete Testis; C: Seminiferous tubules; D: Epidermoid cyst wall; E: Cyst contents.

in maximum dimension with a smooth outer surface and a single thin-walled cyst replacing most of the testis. The cyst contained soft, friable, pale material. Microscopy showed a benign epidermoid cyst with no other tissues present (Fig. 2). The patient made a complete recovery.

## Discussion

Epidermoid cysts (ECs) of the testis are benign ectodermal tumours. They account for approximately 1% of testicular tumours in adults with a peak in the third decade [2]. Price [3] defined them as intra-testicular, squamous, epithelial-lined cysts containing keratinised material with neither teratomatous nor adnexal elements. The main differential diagnosis is a teratoma. ECs occur in a similar age group to teratomas prompting workers to suggest that ECs are mono-dermal, benign equivalents [3, 4]. However, this assertion remains controversial since others have suggested that ECs are in fact sub-types of germ cell tumours [2]. The testicular tumour markers  $\alpha$ -fetoprotein and  $\beta$ HCG, raised with germ cell tumours, are normal with ECs [1]. Usually ECs can be diagnosed by ultrasonography which may reveal a classical

onion-ring appearance. Maizlin [1] and Johnson [5] have reported that this sign is non-specific and do not support isolated ultrasonographic diagnosis. If the clinical profile is that of a slow-growing, small, intra-testicular tumour with negative tumour markers within a normal testis, testicular-sparing surgery with follow-up has been advocated in the younger patient [3].

In our case the use of scrotal trans-illumination may have altered the clinical diagnosis of a hydrocele. A pre-operative ultrasound scan again may possibly have identified an EC or at least excluded a simple hydrocele. The patient could then have been counselled and scheduled for an orchidectomy. As a result of our experience with this case we will have a lower threshold for requesting testicular ultrasound. Patients not undergoing ultrasound prior to hydrocele repair should be counselled in the risk of orchidectomy should unanticipated pathology be encountered.

## Conflict of Interest

None

## References

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