



Beware the retracted testis: A novel case of metastatic goblet cell cancer causing testicular retraction

Brian O'Sullivan^{a,*}, Michael Holmes^a, Shiva Nair^a

^a Department of Urology, Waikato Hospital, Pembroke Street, Hamilton, 3204, New Zealand

ARTICLE INFO

Keywords:

Goblet cell cancer
Testicular retraction
Case report

ABSTRACT

Spontaneous retraction of the testes is a rare, underreported, and under-described phenomenon. Our case describes a 58-year-old man with spontaneous retraction and constriction of his right testis. After an acute orchidectomy was performed secondary to pain, histology revealed metastatic goblet cell cancer. This is the first ever recorded case in the medical literature and is a truly rare and novel differential for the spontaneously retracted testis.

1. Introduction

Spontaneous retraction of the testis is a rare and poorly described phenomenon. We present the case of a 58-year-old man with metastatic goblet cell adenocarcinoma who presented with a retracted right testis.

2. Case

Mr X was referred to the Urology service with a year long history of gradual retraction of his right testis into the inguinal canal, associated with some mild discomfort. His left testis had also begun to retract but remained in the scrotum. Clinical exam revealed a retracted right testis within the inguinal canal that could not be pulled back down and a left testis within the scrotum, pulled toward the external ring with a tight band felt superiorly. USS showed a bi-lobed appearance of the right testis, likely secondary to compression (Fig. 1). Perfusion and morphology of both testes appeared normal. The patient was offered orchidopexy and counselled about orchidectomy but declined as he was relatively asymptomatic.

Six months later, he presented acutely to the Emergency department with severe right testicular pain. Ultrasound showed reduced perfusion of the right testis and the same bi-lobed appearance. The left testis

remained in the scrotum but showed a new dumbbell appearance.

The patient came forward for acute right inguinal exploration. The right testicle was not torted but enclosed in a fibrotic band that was difficult to mobilise. Right orchidectomy was performed. Histology revealed diffusely infiltrative adenocarcinoma with goblet cell and neuroendocrine differentiation (Fig. 2). The tumour did not invade the testis and was centred in the spermatic cord, epididymis, and paratesticular soft tissues (Fig. 2A). Immunohistochemistry staining was positive for Synaptophysin (Fig. 3A), indicating neuroendocrine malignancy, and for CK20 and CDX2 (Fig. 3B), suggesting lower gastrointestinal tract origin.

A staging contrast CT scan of the Chest, Abdomen and Pelvis was performed which showed no obvious primary lesion but indeterminate pleural and liver lesions. The appendix was not identified and no appendiceal mass was seen. There was no history of appendectomy. He had no constitutional symptoms. He was referred to medical oncology for surveillance. A follow-up CT scan, performed three months after his initial scan, did not identify a primary lesion. The pleural and liver lesions were stable in appearance and felt to likely represent benign aetiologies.

* Corresponding author. Urology Department, Level B1, Waikato Hospital, Hamilton, 3204, New Zealand.

E-mail address: brian.osullivan@ccdhb.org.nz (B. O'Sullivan).

<https://doi.org/10.1016/j.eucr.2022.102039>

Received 1 February 2022; Accepted 24 February 2022

Available online 25 February 2022

2214-4420/© 2022 Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

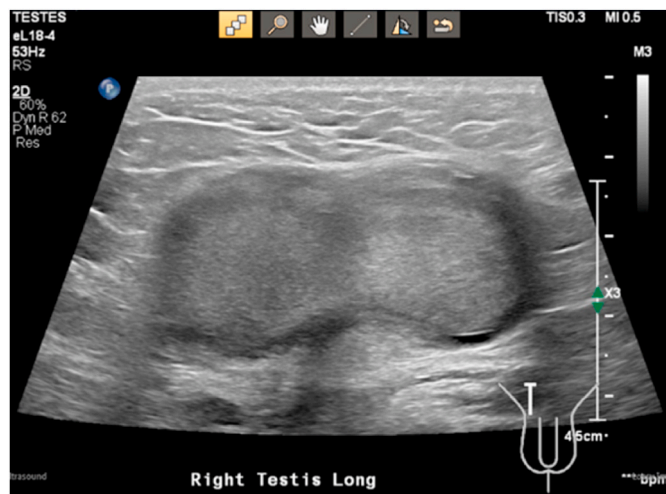


Fig. 1. Ultrasound scan of retracted right testis in the inguinal canal showing atrophy and a bi-lobed appearance.

3. Discussion

We present the first ever recorded case of metastatic goblet cell adenocarcinoma causing retraction and constriction of the testes. Goblet cell adenocarcinoma, first described in 1969, is a rare tumour almost

exclusively originating from the appendix.¹ It accounts for less than 14% of all appendiceal tumours with an incidence of 0.05/100000/year.² Metastases have been described in a few small studies and individual case reports with increased incidences of synchronous and metachronous disease elsewhere in the GI tract.³ This case represents the first recorded case, to our knowledge, of metastasis down the spermatic cord to the para-testicular soft tissue. Interestingly, a primary lesion has yet to be identified on imaging. However, given the disease location, the appendix is thought to be the most likely source with peritoneal spread down the tunica vaginalis as a possible mode of metastasis, given that the malignancy is in the extra-testicular tissue.

4. Conclusion

In conclusion, we present the first ever recorded case of spontaneous retraction of the testis secondary to metastatic goblet cell cancer. This truly unique, novel phenomenon is a rare differential for the spontaneous retracted testis.

Declaration of competing interest

Nothing to Disclose.

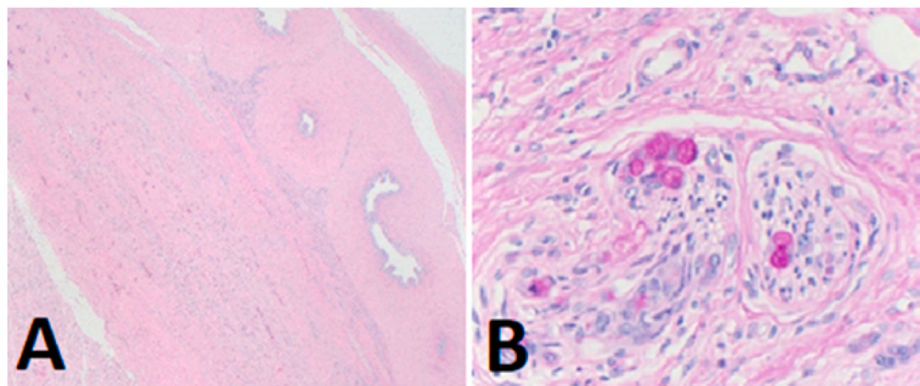


Fig. 2. Histology specimen X20 showing tumour cells surrounding the epididymis on the right and normal testicular parenchyma is on the left (A) and X400 showing positive Periodic Acid Schiff (PAS) stain highlighting goblet cells (B).

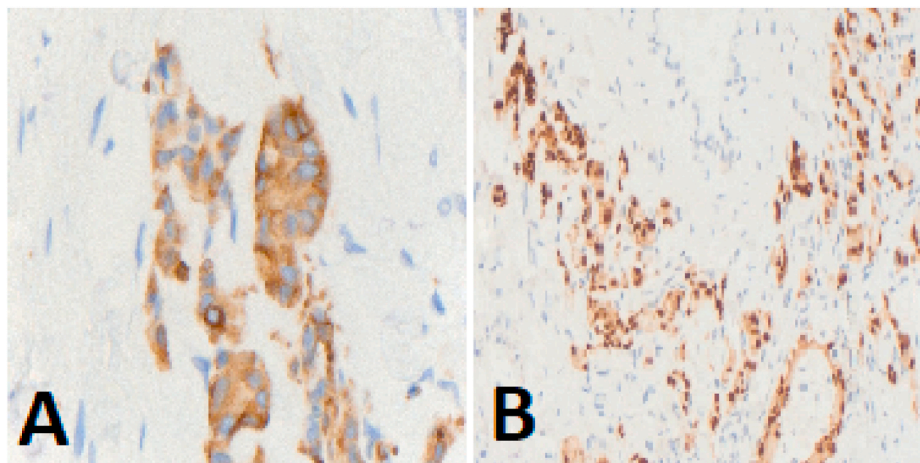


Fig. 3. Histology (X400) showing positive Synaptophysin (A) and CDX2 (B) Immunohistochemistry staining indicating neuroendocrine malignancy (A) with possible gastrointestinal tract origin (B).

Acknowledgements

Informed consent was obtained from the patient for this case report to be written and submitted for publication.

References

1. Roy P, Chetty R. Goblet cell carcinoid tumors of the appendix: an overview. *World J Gastrointest Oncol.* 2010;2(6):251. <https://doi.org/10.4251/wjgo.v2.i6.251>.
2. Clift A, Kornasiewicz O, Drymoussis P, et al. Goblet cell carcinomas of the appendix: rare but aggressive neoplasms with challenging management. *Endocrine Connections.* 2018;7(2):268–277. <https://doi.org/10.1530/EC-17-0311>.
3. Goede A, Caplin M, Winslet M. Carcinoid tumour of the appendix. *Br J Surg.* 2003;90(11):1317–1322. <https://doi.org/10.1002/bjs.4375>.