



Primary Mucinous Adenocarcinoma in Spermatic Cord: A Case Report

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Abstract

In general, malignancies of spermatic cord are extremely rare. We herein reported a case of primary mucinous adenocarcinoma of the spermatic cord after radical inguinal orchiectomy with complete excision of the tumor. A mass located in inguinal area should always be considered as a malignant tumor and further general examination is necessary for distant metastatic lesions detection during the peri-operative period.

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Introduction

Primary paratesticular tumors are very rare, accounting for less than 10% of all intrascrotal tumors. They are divided into testicular tunica, epididymis and spermatic cord tumors according to their location. More than 75% of these lesions arise from the spermatic cord [1]. A population-based study reported that 362 patients of Spermatic Cord Tumors (SCTs) diagnosed from 1973 to 2007 were identified with an estimated annual incidence of 0.3/100000 men from the Surveillance, Epidemiology and End Results (SEER) database. Since the majority of SCTs are benign, most malignant SCT are sarcoma [2]. It is difficult for clinicians to identify the spermatic cord masses during physical

examination. In addition, SCTs may be mistakenly diagnosed as more common diseases, such as inguinal hernia or cord lipoma. Further image modality is necessary to clearly visualize lesions located in spermatic cord. Radical inguinal orchiectomy with wide local resection of surrounding soft tissues is the standard treatment of SCTs currently [3].

Almost half of patients were diagnosed with liposarcoma (46%) followed by leiomyosarcoma (20%), histiocytoma (13%), rhabdomyosarcoma (9%), and fibrosarcoma (2%). The remaining 10% of SCTs were consisted of 5% not otherwise specified



sarcoma and 5% as other subclassification of cancers [2]. Therefore, it remains diagnostic and therapeutic challenges due to limited information. We herein report a 62-year-old male presented with primary mucinous adenocarcinoma in spermatic cord.

Case presentation

A 62-year-old man presented to our urologic clinic with a 1-year history of a painless swelling over the right groin area without other specific symptoms. Upon physical examination, a hard, fixed, nontender right inguinal mass was palpable. The mass was not reducible when the patient laid down or pushed against it. The appearance of bilateral scrotum showed normal. Routine blood and biochemical analysis was all within normal ranges. Computed Tomography (CT) of the abdomen revealed a spindle-shaped cystic tumor approximately 5.8×3.1 cm² with dense fluid, septa, and calcification (Figure 1). Right total excision of the tumor with the spermatic cord and testis was performed.



Figure 1: Spindle-shaped cystic tumor approximately 5.8×3.1 cm² containing dense fluid, septa, and calcification in the right inguinal area.

Gross pathological examination revealed a multilocular cystic mass, measuring 14.0 cm in greatest diameter which extended to tunica vaginalis, containing jelly-like mucinous, separated by multiple fibrous septa (Figure 2).



Figure 2: Multilocular cystic mass containing jelly-like mucinous adenocarcinoma separated by fibrous septa.

Microscopically, multilocular cystic spaces lined by mucin-secreting columnar epithelial cells, most bearing basally-located nuclei with focal cytological atypia and nuclear stratification, or forming complex branching glandular and papillary structure. Focal stromal invasion was identified. The testis and epididymis were free of tumor involvement. This histopathologic finding was compatible with mucinous adenocarcinoma.

No previous studies reported primary mucinous adenocarcinoma of spermatic cord before. Metastatic tumors of the spermatic cord are also extremely uncommon. The primary lesions are usually located in the gastrointestinal tract, kidneys and prostate [4]. The pathologist suggested to exclude the potential extra-spermatic cord origin based on the rarity of primary spermatic cord tumors. Thus, our case was probably secondary to gastrointestinal cancer after considering the pathological findings. The patient underwent a complete evaluation, including abdominal CT, upper and lower gastrointestinal endoscopy to investigate the possible extra-spermatic cord origin. No mass lesions were detected. In addition, serum Carcinoembryonic Antigen (CEA) and serum Carbohydrate Antigen 19-9 (CA19-9) were normal. Therefore, the patient was finally diagnosed as the primary mucinous adenocarcinoma of spermatic cord. The patient recovered well and was discharged 2 days after surgery.

Discussion & conclusion

In general, malignancies of spermatic cord are rare entities. The available information on clinical management and outcomes are mainly from case reports, limited small series, few literature reviews, and expert opinion. Since 90% of malignant SCTs are sarcomas, the general treatment protocols of sarcoma are followed. Radical inguinal orchiectomy with complete excision of the tumor and high ligation of the cord is regarded as the standard treatment for patients with SCTs [5].

There was no literature information on primary mucinous tumors of the spermatic cord. Thus, the histogenesis and carcinogenesis have not been clearly investigated. Metastatic mucinous adenocarcinomas of the spermatic cord are more common. The primary lesions mostly arise from gastrointestinal tract and in some cases, from kidneys and prostate [4].

In our case, he was treated with a complete excision of the tumor with the spermatic cord and testis with free surgical margins. CT scan and gastrointestinal endoscopy examinations revealed no extra-spermatic cord lesions. Thus, the diagnosis of primary mucinous adenocarcinoma of spermatic cord was confirmed. Regular follow-up to rule out recurrence is strongly counseled to the patient. Although literatures of management and prognosis of SCT are still lacking, a mass located in inguinal area should always be considered as a malignant tumor.

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