CYSTIC ADENOCARCINOMA OF PROSTATE: A CASE REPORT

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SUMMARY

Prostate cancer is not uncommon amongst the elderly men. Diagnosis is made using histopathology specimens of Transrectal Ultrasound guided biopsy of the prostate gland. However, prostate cancer presenting as a intra-prostatic cysts are rare. We report a case of elderly gentleman who presented with malignant intra-prostatic cysts.

KEYWORDS: *intra-prostatic cysts, prostate cancer*

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Introduction

Prostatic cysts or intra-prostatic cystic lesions have been identified and reported for more than a century by various authors [1,2]. The significance of these conditions was initially undetermined as it has been generally regarded as benign conditions and patients are usually asymptomatic.

Rarely, intra-prostatic cystic lesions may present as a malignant condition [1]. When the cyst is of considerable size, the patient may also present with lower urinary tract symptoms. In this report, we present a rare and unusual prostatic cancer presenting as cystic lesions which was observed using radiological imaging.

Case Report

A 67 year old Chinese gentleman presented with an acute urinary retention preceded by 4 days of worsening of lower urinary tract symptoms. Initially, continuous bladder drainage using 16 Fr Foley catheter was performed. Subsequently, a successful trial controlled urination without the use of catheter was achieved following the use of oral alpha blocker.

On subsequent clinic follow up, his prostate specific antigen (PSA) was noted to be 1324 ng/ml, while digital rectal examination demonstrated a nodular, hard and tender prostate gland of 60 grams. This corresponded to a clinical presentation of a T3 prostate tumour. Transrectal ultrasound of prostate revealed an unusually large tender prostatic gland with multiple cystic lesions. This raised the possibility of the malignancy of the prostate gland.

MRI of the prostate later confirmed an intra-prostatic cystic lesion measuring 5 cm x 6 cm. Further examination revealed the presence of fluid level indicated that there was intra lesional haemorrhage, the involvement of seminal vesicles and infiltration of neurovascular bundles as shown in Fig. 1. Subsequently, the patient underwent a transrectal ultrasound guided 10 cores prostatic biopsy which confirmed a Gleason 4+5 adenocarcinoma of the prostate. A staging CT scan thorax abdomen pelvis was performed. He was then offered hormonal manipulation therapy achieved by performing bilateral orchidectomy. Following the operation, his PSA level had reduced remarkably. Presently he is still under follow up with regular PSA test and urinary flow assessment done at each visit.

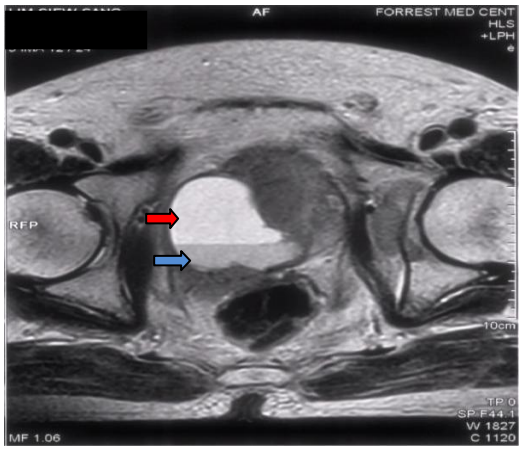

Figure 1. *MRI of the prostate gland with malignant cyst. Red arrow shows cystic lesion of prostate gland. Blue arrow shows haemorrhage in the cyst.*

Discussion

Prostatic cysts were first reported in 1869, and since then about 100 cases have been identified and reported by Anding *et al* [2]. With the wide availability of highly sensitive and high resolution Transrectal Ultrasonography and Magnetic Resonance Imaging modalities, more cystic intra-prostatic lesions are now being identified.

However most of these cysts are benign and these include Mullerian cysts, utricle, retention cysts in benign prostatic hyperplasia and even prostatic abscesses. In a study by Hamper et al, 22 of 277 patients (7.9%) who underwent biplane transrectal ultrasonography showed evidence of one or more intra-prostatic cystic lesions [3]. Mullerian duct cysts are found in the midline, and are attributed to developmental abnormality where they do not drain into the posterior urethra. Prostatic utricle cyst will also present in the midline, but drain into the posterior urethra [4,5].

Prostatic retention cysts are usually located peripherally while the ejaculatory duct cysts, are found just lateral to midline within the central zone. These structures usually contains spermatozoa [4,5]. Patients with ejaculatory duct cyst may complain of subfertility and haematospermia. Transurethral aspiration or incision of the cyst may aid in the diagnosis and treatment of these benign disorders.

Malignancy associated with cystic lesions of the prostate are very rare. Both benign and malignant prostate neoplasms may contain cystic components. Multilocular prostatic cystadenoma is a rare benign tumor that can grow to a large size causing significant lower urinary tract symptoms. However, prostatic adenocarcinoma may occasionally show cystic features. Other tumors of the prostate gland that exhibit cystic components include papillary cystadenocarcinoma and combined transitional cell/adenocarcinoma. Rarely, leiomyoma or liposarcoma in the prostate may have cystic elements. On the MRI, the heterogeneity of signal intensity of the cystic components and the presence of soft-tissue elements in the lesion indicate a neoplastic cause [4].

There are currently two hypotheses of which the development of cystic prostatic carcinoma can be explained. The first postulates that these lesions are mainly pseudocyst, due to central necrosis or haemorrhage in the prostatic cancer focus. The second hypothesis is that of a malignant degeneration within a retention cyst [6].

Magnetic resonance imaging is a sensitive tool to assess these intra-prostatic cystic lesions and to determine the extent of these tumours. Trans rectal ultrasound(TRUS) guided cytology obtained from the cyst maybe useful in confirming the sinister nature of these lesions.

Although most cystic lesions of the prostate are rare and predominantly benign in nature, prostatic neoplasia needs to be excluded especially in the presence of elevated PSA and suspicious findings in TRUS and MRI imaging.

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