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Mucinous Adenocarcinoma of Prostate: A Case Report and Review of Literature

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Abstract

Mucinous adenocarcinoma(MC) of prostate is extremely rare, with an incidence of approximately 0.2% Mucinous adenocarcinoma of the prostate usually has no obvious symptoms, its usual clinical symptom are frequency, dysuria, difficulty in voding which are similar to benign prostate hypertension, the diagnosis of mucinous adenocarcinoma is made only when extraluminal pools of mucin involve at least 25% of the tumor volume at prostatectomy, the different with the prostate acinar cell carcinoma is that MC is more likely to occur in skeletal and visceral metastases. Some studies suggest that 77.8% of MC patients' PSA will be increased, and there is no significant difference in the degree of increase compare with the prostate acinar cell carcinoma. This case report describes the excellent clinical course of a 74-year-old patient with mucinous adenocarcinoma of the prostate, treated by trans-urethral resection of prostate (TURP). In our case, mucinous adenocarcinoma of the prostate does not appear to behave differently than acinar prostate cancer, and with a review of the current literature.

Keywords: Mucinous adenocarcinoma; Prostate; TURP

Case Report

Patient male, age 64, adrenal mass found during a body. A 74-year-old patient with frequency, dysuria, difficulty in voding in september 2012. digital rectal examination revealed a Shallow central sulcus of prostate, have no node on both lobe of the prostate, his serum tPSA was 2.75 ng/ml, fPSA: 0.367 ng/m.The results of ultrasound examination in our hospital showed that the prostate was enlarged with calcification, prostate size: 54 mm*50 mm*48 mm, the residual urine volume was 500 ml (Figure 1). CT exam revealed an enlarged prostate extended to the bladder with uneven density (Figure 2). Cystoscopy revealed the papillary tumor was found in the neck of the bladder and the posterior urethral (Figure 3): The patient underwent a preoperative biopsy of the tumor, which revealed the result of adenocarcinoma with immunohistochemical: CK(20)(-), 34Be12(-), CK(7), (weak+), CK8/18 (+), P504S(+), PSA(weak+), PSAP(weak+), p63 (-) (Figure 4), CT scan and ECT scan were negative for metastases. However, no distinct urothelial mass was seen and the bladder urothelium appeared unremarkable. So, the patient was scheduled for TURP, deep to the fibrinous material, a papillary tumor was visualized and resection completely. The patient was discharged on the 8th postoperative day pathologic diagnosis reported the mucinous adenocarcinoma of the prostate, under the microscope, a large number of atypical cells in tubular glands, large nucleus and few cytoplasm, karyoplasmic ratio increased, distinct nucleoli, intraductal secretion, cell invasive growth, Immunohistochemistry: 34Be12 (-), CEA (+), P504S (+), PSA (-), PSAP (-) (Figure 5). The patient was treatment with medical castration and measured PSA and testosterone value every 3 months. At present, there is still in follow-up, who is still alive without metastasis.

Figure 1: Ultrasound examination in our hospital showed that prostate was enlarged with calcification, prostate size: 54 mm*50 mm*48 mm.

Figure 2: CT exam revealed an enlarged prostate extended the to the bladder with uneven density.

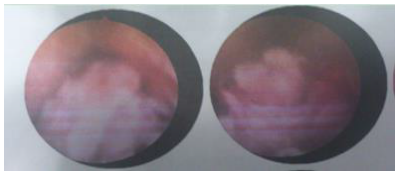

Figure 3: Cystoscopy revealed the papillary tumor was found in the neck of the bladder and the posterior urethral.

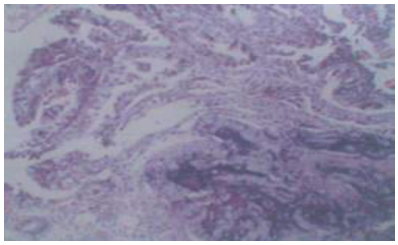

Figure 4: Pathological section from prostate.

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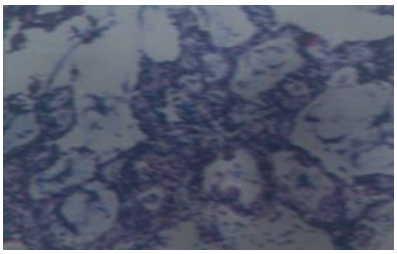

Figure 5: Pathological section from prostate after TURP.

Discussion

Mucinous adenocarcinoma of the prostate was first described by McNeal in 1991 and were observed in 13 out of 33 mucin-producing prostatic adenocarcinomas. Based on the 2005 International Society of Urologic Pathology (ISUP) consensus conference defined by the presence of pools of extraluminal mucin involving at least 25% of the tumor volume at prostatectomy. Mucinous adenocarcinoma is extremely rare with an incidence of approximately 0.2%. There are 268 patients with prostate cancer in our hospital and merely 1 patient diagnosed as mucinous adenocarcinoma [1-3].

The etiology of mucinous adenocarcinoma (MC) of the prostate is still unclear, it is thought that the mucinous adenocarcinoma of the prostate is similar to that of adenocarcinoma of the prostate, which is related to genetic, environmental, androgen and other factors, relevant research shows that Smaller bodies are more unstable in Mucinous adenocarcinoma [4-6]. Dhom believes that the etiology of mucinous adenocarcinoma of the prostate may be related to the endocrine epithelium of the prostate, Saez's study found that seventh to ninth of the acetylated C elements are causes of mucinous adenocarcinoma of the prostate, because such mutations was not found in prostate acinar cell carcinoma [7,8].

Mucinous adenocarcinoma of the prostate usually has no obvious symptoms in the early stage, most of which are similar as benign prostatic hyperplasia. However, when the tumor invades the urethra and bladder neck, BOO symptoms and bladder irritation symptoms may occur, and even acute urinary retention and haematuria may occur. There were statistical data showing that mucinous adenocarcinoma of the prostate lead to Urinary tract obstruction (70.2%), haematuria (25.5%), bladder irritation (17%), transrectal ultrasound can initially determine the size of the lesion of prostate, MRI can be used to determine the existence of the invasion of the surrounding tissues and organs, and lymph nodes metastases. ECT can detect bone metastases early, which are similar to those of prostate acinar cell carcinoma. The different with the prostate acinar cell carcinoma is that MC is more likely to occur in skeletal and visceral metastases. Some studies suggest that 77.8% of MC patients' PSA will be increased, and there is no significant difference in the degree of increase compare with the prostate acinar cell carcinoma [9]. And recent study show that ERG is expressed in almost 50% of cases of mucinous prostatic adenocarcinoma and prostatic adenocarcinoma with mucinous features, similar to the expression in conventional prostatic adenocarcinoma. although additional genetic studies are required to confirm that [10].

The treatment of mucinous adenocarcinoma of the prostate is still controversial, and it is mainly divided into surgery and endocrine therapy. There were few reports of radiotherapy. It is generally accepted that surgical treatment is still the most effective method for the treatment of early mucinous adenocarcinoma of the prostate, endocrine therapy remains controversial in the treatment of mucinous adenocarcinoma of the prostate. Mucinous adenocarcinoma is not sensitive to radiotherapy. The prognosis of mucinous adenocarcinoma of the prostate is better than that of conventional prostatic adenocarcinoma. Saito et al. [11] found that the prognosis of mucinous adenocarcinoma was similar to that of well differentiated adenocarcinoma, with a 3-year survival rate of up to 50%. The 5-year survival rate was 25%. This case we use the Endocrine therapy, currently 3 years of follow-up, patients are generally in good condition, except for frequent micturition, urine wait. CT, ECT have found no evidence of bone metastasis and distant metastasis, and the therapeutic effect was better than that reported in the literature. And the patient is still in follow-up.

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