

Case Report

Prostatic adenosquamous carcinoma - A rare case report


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	International Archives of Integrated Medicine, Vol. 2, Issue 12, December, 2015. Copy right © 2015, IAIM, All Rights Reserved. Available online at http://iaimjournal.com/	
	ISSN: 2394-0026 (P)	ISSN: 2394-0034 (O)
	Received on: 11-11-2015	Accepted on: 05-12-2015
Source of support: Nil		Conflict of interest: None declared.
How to cite this article: Jain M, Rathod GB, Tandan RK, Rai P. Prostatic adenosquamous carcinoma - A rare case report. IAIM, 2015; 2(12): 52-54.		

Abstract

Carcinoma of the prostate gland is the most common malignant tumor affecting adult males. Adenosquamous carcinoma of the prostate is a much more unusual histological variant of prostate cancer characterized by coexistence of malignant glandular and squamous elements. The prognosis for patients with Adenosquamous carcinoma of the prostate is very poor, even in those patients with localized disease who subsequently underwent prostatectomy, suggesting this is a disease with a propensity for early microscopic dissemination.

Key words

Prostate gland, Adenosquamous carcinoma, Unusual histological variant.

Introduction

Carcinoma of the prostate gland is the most common malignant tumor affecting adult males. Adenosquamous carcinoma of the prostate is a much more unusual histological variant of prostate cancer. Microscopically, it is characterized by coexistence of malignant glandular and squamous elements. They usually

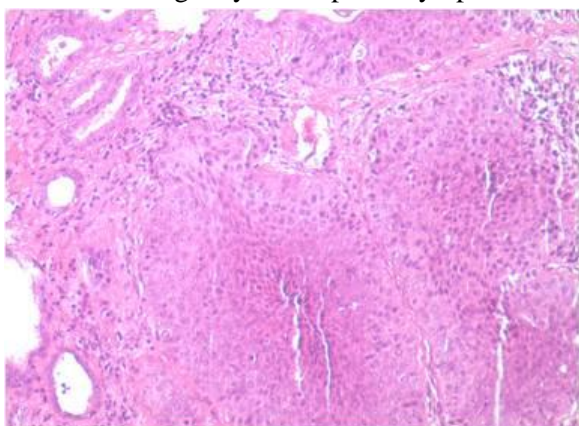
occur after hormonal or radiotherapy although de novo occurrence is also seen. These tumors have poor prognosis. They are refractory to hormonal treatment and widespread metastasis at the time of diagnosis is common [1]. Till today, there is no well guideline for the treatment of adenosquamous carcinoma. Here we are reporting a case of this rare entity.

Case report

A 57-year-old male patient presented with poor urinary outflow and increased urinary frequency. On examination, the external genitalia were normal but the prostate was non-tender, enlarged, hard, and nodular. His urine analysis and blood biochemistry, were normal. Ultrasonography revealed enlarged prostate of 80 g with non-homogenous texture and post residual urine of 135 ml. Transurethral resection of the prostate (TURP) was done and the prostatic chips were sent to the pathology department for histopathological examination. Grossly Multiple pale white, TURP chips all together measuring 4.3 cm were received.

Microscopically, the sections showed fibromuscular tissue separated by sheets and clusters of pleomorphic squamous epithelial cells. Individual tumor cells showed hyperchromatism, high N: C ratio and prominent nucleoli and mitotic activity. Small tissue bits showed tumor cells arranged in acinar pattern. A transitional area comprising of both the malignant epithelial components was also noted. The final diagnosis was given as adenosquamous carcinoma of prostate. (**Microphotograph - 1, 2**) Hormone therapy was initiated and radiotherapy was planned for the patient.

Microphotograph – 1: Large, cohesive cells, with abundant glassy eosinophilic cytoplasm.

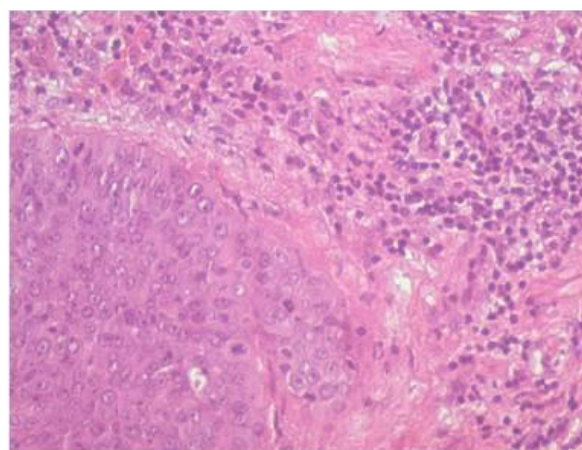


Discussion

Adenosquamous carcinoma is defined by the presence of both glandular (acinar) and

squamous components [2, 3, 4]. Since the first description by Thompson, approximately 33 cases of ASCC of the prostate have been reported [1, 4-8]. Of all ASCC cases reported in the literature, two-thirds involved patients previously treated for prostatic adenocarcinoma with hormones and/or radiation [1, 4-8]. Clinically, these patients often present with bladder outlet obstruction and dysuria, and are quite large. The prostate-specific antigen (PSA) level may or may not be elevated depending on the squamous component.

Microphotograph – 2: Malignant squamous cells with well defined cell borders and focal keratinization.



There are various hypothesis for the histogenesis of the adenosquamous carcinoma of prostate. It is believed that the squamous component develops from squamous metaplasia of acini and ductal elements. Nonneoplastic squamous metaplasia is frequently seen in the prostate associated with chronic inflammation or infarction.

In addition, malignancies such as hormonal or radiation-treated prostatic adenocarcinoma or urothelial carcinoma can show extensive squamous metaplasia. It has also been hypothesized that it could derive from pluripotent stem cells capable of multidirectional differentiation. Microscopically differentiating adenosquamous carcinoma from adenocarcinoma with concomitant squamous metaplasia might be difficult because of the resemblance between

squamous metaplasia and well-differentiated squamous carcinoma. However, squamous and adenosquamous carcinomas lack the most distinctive feature of squamous metaplasia, which involves low nuclear atypism and is associated with ischemic necrosis and fibrous connective tissue stroma that are devoid of smooth muscle cells [7].

The Gleason score can be used for the glandular component, but not for the squamous component, of ASCC. Since squamous component is predominant in the above case, Gleason score could not be applied.

They commonly localize in transitional zone causing urinary obstruction, as in our case, and may present with metastatic disease [6, 9]. The most frequent sites for the metastasis from prostate cancer are bone, lymph nodes, and lung. However, among malignancies metastasizing to testis, prostate is the most common organ of origin. This probably reflects the frequent use of orchiectomy for hormone deprivation in the advanced disease. The route of spread is claimed to be through the lumen of the vas deferens or the lymphatics [10, 11, 12].

However, the aggressive course of adenosquamous variant of prostate carcinoma almost invariably hinders attaining survival times long enough to see the treatment outcomes, still leaving adenosquamous carcinoma with unknown histogenesis and with uncertain choices for the best treatment.

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