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Case Reports

ACUTE APPENDICITIS DUE TO METASTASIS OF PROSTATIC CARCINOMA

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ABSTRACT

A 70 year old male presented with right lower quadrant pain and anorexia for about 72 hours prior to hospital admission. He underwent laparotomy with impression of acute appendicitis. The operative finding was an inflamed tumoral appendix without appendicular base involvement, and appendectomy was done. The patient had an uneventful post-op course.

Due to the pathology report of prostatic carcinoma he underwent cystoscopy and biopsy of prostate on the 4th post-op day. Histopathology of the appendix was consistent with metastatic adenocarcinoma of the appendix with prostatic origin. Histopathology of the prostatic specimen was consistent with high grade prostatic adenocarcinoma.

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INTRODUCTION

Appendiceal tumours can be divided into primary and metastatic; the latter usually originate from the gastrointestinal tract, breast, and female genital tract.[1,2]

Metastatic prostatic carcinoma may rarely be seen in the testis, skin, penis, central nervous system, liver, adrenal gland, kidneys, breasts & lungs.[3] But metastasis to the appendix from prostatic carcinoma has not been reported in the reviewed literature.

CASE REPORT

A 72 year old male patient was referred with a chief complaint of right lower quadrant (RLQ) pain and anorexia since 72 hours before admission. There was no history of nausea, vomiting, constipation, diarrhea or urinary frequency, dribbling or dysuria. In physical examination there were no remarkable signs except for RLQ tenderness and guarding.

On rectal examination there was a firm palpable prostate. Urinalysis was unremarkable except for trace proteinuria. All biochemical findings such as blood sugar, BUN, electrolytes and serum creatinine all were normal. Hematological indices were as follows: Hgb=11, WBC count 10500 with 73% neutrophils, 25% lymphocytes and 2% monocytes. With a diagnosis of acute appendicitis the patient underwent laparotomy. Upon operation we found an inflamed tumoral appendix with a normal looking appendicular base and a palpable 0.5×0.5 cm retroperitoneal mass in the course of the right ureter. The appendicular tip was positioned in the upper pelvic area. Urologic consultation was done and post-op follow-up planned. There were no post-op complications. Histopathological finding was consistent with acute inflammation and the presence of metastatic adenocarcinoma (Fig.1) which was confirmed using immunohistochem-

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istry study for prostate specific antigen (PSA) which was positive in our case (Fig. 2).

Following the above finding the patient underwent a complete check-up by a urologist. Lab tests such as SGOT, SGPT, billirubin, calcium, and phosphorous, were in the normal range. On the 4th post-op day cystoscopy and biopsy of the prostate was done. Histopathologic examination of the prostate confirmed prostatic adenocarcinoma (Fig. 3). The patient was discharged later with no complication.

The patient was readmitted to the hospital about 3 months after appendectomy, at which time he underwent TURP and bilateral orchiectomy followed by chemotherapy due to advanced cancer. The other readmission of this patient was due to abdominal pain, jaundice and multiple hepatic metastases. Unfortunately he died about two months later, sixteen months after his first admission.

DISCUSSION

Appendiceal malignancies are not common, occuring in 0.5% of all appendectomies, and usually discovered in laparotomy either as an incidental finding or in association with acute inflammation of the appendix or an abdominal mass.[4,5,6,7] Appendiceal tumors can be divided into primary and metastatic tumors. The most common lesion is carcinoid tumor which accounts for some 90% of all primary tumors of the appendix.[8,9,10] Other primary appendiceal malignant tumors are adenocarcinoma, malignant mucocele and lymphoma, in order of frequency.[4] Benign tumors of the appendix are rare, including mucoceles, neuromas, leiomyomas, villous adenomas,[11] granular cell tumors and paraganglionomas.[2] Metastasis to the appendix usually originates in carcinomas of the gastrointestinal tract, breast or female genital tract.[1,2] Although it is very rare[12] metastasis to the appendix from small cell bronchogenic carcinoma,[13,14] adenocarcinoma of the lung,[15] gastric cancer,[12] choriocarcinoma of the mediastinum[16] and breast cancer[17] has been reported in the literature, although metastasis of prostatic cancer to the appendix has not been reported.

Carcinoma of the prostate is the most common visceral cancer in males ranking as the second most common cause of cancer-related deaths in men older than 50 years of age, after carcinoma of the lung. It is predominantly a disease of older males, with a peak incidence between the ages of 65 and 75 years.[18,19] Carcinomas of the prostate are often clinically silent particularly during their early stages. Later in the course of illness it may become symptomatic. Symptoms of prostatism and lower urinary tract obstruction and even symptoms of metastasis may become evident.[18,19]

The usual sites of metastasis are pelvic lymph nodes, bone and the lungs. However, many unusual sites of metastasis are possible including kidneys, breast, brain,[3] liver, adrenals, seminal vesicles, bladder and rectum.[19] Metastasis of prostatic carcinoma to the appendix has not been reported.

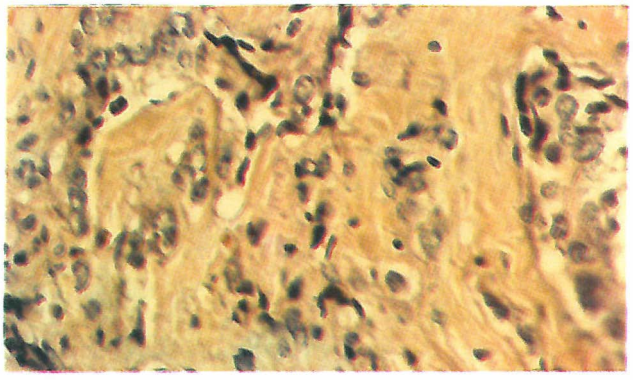

Fig. 1. Metastasis of prostatic carcinoma to submucosa of the appendix (H & E ×400).

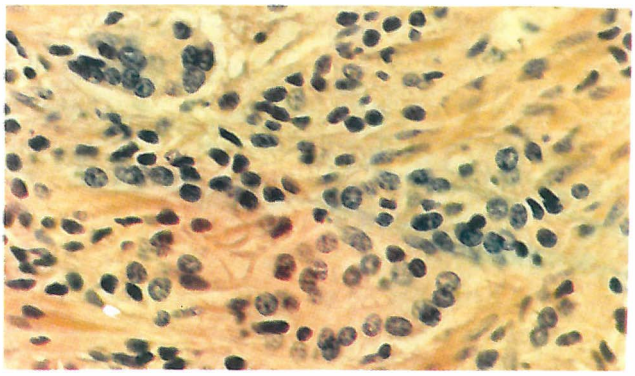

Fig. 2. PSA reactivity in tumor glands (Immunohistochemical staining ×400).

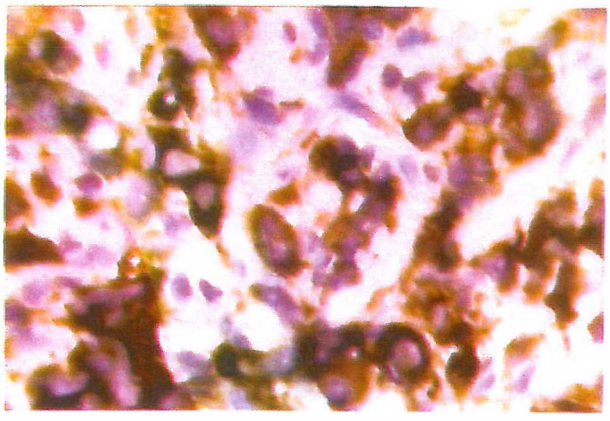

Fig. 3. Prostatic adenocarcinoma, composed of irregular glands lined by epithelial cells with relatively monomorphic nuclei, arranged in one-cell layer (H & E ×400).

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Primary adenocarcinoma of the appendix needs right hemicolectomy for treatment[4,5,6,8] but the secondary type probably needs appendectomy and treatment of the primary tumor as metastatic cancer.

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