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Squamous Cell Carcinoma of the Bladder Presenting with Ocular and Generalized Skin Metastasis

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Abstract: ***Transitional cell carcinoma is the commonest type of bladder cancer worldwide. Squamous cell carcinoma is rare in the western world but common in schistosoma endemic areas like Africa. Very rarely do we see squamous cell carcinoma of the bladder with metastasis to the skin and eye. This paper reports such case.***

Keywords: Squamous cell, Carcinoma, Bladder, Ocular, Skin, Metastasis.

1. Introduction

Carcinoma of the bladder is the 5th common malignancy in the USA[1]. Squamous cell cancer is rare in the western world (6%) [2], but prevalent in schistosoma endemic areas like Africa. In endemic area 30-40% of bladder cancer is associated with squamous cellcarcinoma[3]. Cigarette smokers have a 4 fold risk of developing bladder cancer[2]. Prolonged exposure of the bladder to schistosoma ova acts as a promoter which can accelerate the aggression of carcinoma of the bladder[4].

Most cases of squamous cell carcinoma present with muscular invasion, and metastasis to the skin and the eye is very rare. Gross painless haematuria is the usual mode of presentation and, approximately 20% of cases may present with only microscopic haematuria[2]. Radical cystectomy is the standard treatment for muscle invasion. Chemo-radiotherapy may have a role in the management of cancer of the bladder. However, prognosis is often poor.

2. Clinical Report

A 34yr old civil servant was admitted with a four months history of haematuria and one month history of generalized skin swelling and protrusion of the eye balls. Haematuria was initially terminal and later total, with associated frequency and passage of fleshy material. He noticed swelling over his right thigh which was initially painless bust later became painful. Bilateral ocular protrusion was insidious, initially painless but later became painful with total blindness and purulent discharge of the left eye. There was no convulsion or jaundice. He had lost some weight and appetite. He had painless heamaturia in childhood, and was a smoker for fifteen years.

On examination he was afebrile but pale. He had bilateral exopthalmus worst in the left [figure 1], discharge from the left eye, and multiple skin nodules involving trunk, upper limbs and lower limbs [figure 2 and 3]. The skin nodules were hard in consistency, and some measured 6 x 4 cm. He was blind in the left eye.

His vital signs were within normal limits, and examination of the chest, and cardiovascular systems revealed no abnormality. He had a suprapubic mass of 18weeks fundal size, it was fixed.

A diagnosis of metastatic carcinoma of the bladder with ocular and skin metastasis was made.

He had a PVC = 26% WBC = 5X 10^9/L (N=61%, L = 30, E = 6%), and his ESR was 5mm/hr.

Urinalysis showed blood +++, and Pr +.

Cystoscopy and biopsy showed infiltrating carcinoma of the bladder and fresh schistosomal ova. Biopsy of the skin lesion revealed infiltrating squamous cell carcinoma on histology. Culture of the eye swab, showed profuse growth of pseudomonas, sensitive to ciprofloxacin. Urine culture yielded growth of E.coli, sensitive to ciprofloxacin. Serum electrolyte was within normal limit.

Abdomino-pelvic ultrasound scan showed a mass occupying the bladder[figure 4], with left obstructive uropathy. Intravenous urography showed opacities over left lower pelvic quadrant. The chest X-ray was normal. MRI showed normal kidneys and ocular metastasis infiltrating orbital bone.

Patient had exenteration of the left eye as palliation because of sepsis and blindness, had ciprofloxacin and potent analgesics as well as 2 pints of blood transfused.
Because of the generalized metastases radical surgery and radiotheraphy were contraindicated. Chemotherapy could have been offered but for the poor general condition of the patient. Patient later died on the 13th week of admission. No post mortem examination was allowed.

3. Discussion

Transitional cell carcinoma (TCC) of the bladder accounts for over 80% of bladder cancer. Squamous cell carcinoma (SCC) and adenocarcinoma account for 5% and 2% respectively. In schistosoma endemic area squamous cell carcinoma accounts for about 30-40% G.O Klufio reported a high incidence of 45% in his study[5]. In Egypt squamous cell carcinoma is responsible for over 75% of bladder tumour[5]. Preponderance of SCC has also been noted in Nigeria[5] but, a recent studies suggested a change in trend with a rise in frequency of TCC (44.9%) relative to SCC[5]. Predisposing factors for bladder carcinoma include cigarette smoking, schistosomiasis, certain drugs and industrial chemicals. The first chemical to be identifield as human carcinogens were aromatic amines including 2 – napthylamine, benzidine, auramin and 4- aminobiphnyl often used in rubber, dye, and cable making industries. Bladder cancer has a long latent period in man and may take twenty or more years to develop after exposure to a known chemical carcinogen.

Available information supports the postulate that infection with S. heamatobium supplies the proliferation stimuli necessary to accelerate the development of detectable tumours from latent tumor foci produced by exposure to low doses of bladder carcinogen[4]. The effect of S haematobium is mediated both through erupting live ova and from irritant effect of calcified dead ova in the bladder submucosa. Bladder cancer spreads through direct local invasion, but lymphatic and haematogenous spread also occurs. Metastasis to the liver, lungs and bones occur commonly; however metastasis to the skin and eye are extremely rare. Cutaneus metastases occur in 2.7-9% of patient with internal malignancy[6]. Ca breast account for vast majority of cutaneous metasteses in females and primary lung cancer in males[6]. Others are hypernephroma, gastrointestinal and haematological malignancies.

Treatment modality for bladder cancer depends on the stage. In early carcinoma of the bladder, adjuvant intravesical chemotherapy may help to reduce the frequency and rate of recurrence. Muscle invasion is common in squamous cell carcinoma and radical cystectomy is the gold standard. Combination of neo adjunavt chemotherapy and radiotherapy is capable of producing 5yr survival rate of 42-63% with organ preservation in 40% of patients[1].
Systemic chemotherapy is the only current modality which provides potential long term survival in patient with metastatic disease. MVAC, CMV, CM(cisplastin/methotrexate), and cyclophosphamide/adriamycin/cispalstin (CISCA/CAS) has been considered to be the most active regimen. The median duration of survival for single agent was 4-6 months but with combined regiment was 8 months[1].

Our patient had both ocular and skin metastasis. Main stay of treatment is palliation. Patient had palliative exenteration of the left eye due to sepsis and blindness, had analygesics, praziquentel and antibiotics-ciprofloxacin. Haematinics (fersolate), oral feeding and parenteral intravenous infusion were also given. Because of the generalized metastasis, surgery and radiotherapy were contraindicated. Chemotherapy could have been tried but for the poor general condition of the patient and besides, chemotherapeutic agents have no long term survival benefit.

Figure 1

Figure 2

Figure 3

Figure 4

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