

CLINICAL ASPECTS OF PROSTATIC CARCINOMA

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SYNOPSIS

Carcinoma of the prostate gland is relatively less common in Singapore compared to the Western Countries. However it is still a common urogenital malignancy, second only to carcinoma of the Bladder.

From July 1976 to June 1981, a total of 46 cases of carcinoma of prostate were available for study. The clinical presentations were mainly that of bladder outlet obstruction but 20% also presented by way of metastasis mainly to the bones.

The value of the serum acid and alkaline phosphatase estimations were analysed and the treatment discussed.

Proposals are made for future policy in the treatment of carcinoma of prostate in the local context.

INTRODUCTION

Carcinoma of the prostate is relatively less common in Singapore compared to the Western Countries. In the United States, it is the second commonest cancer among the males after carcinoma of the lungs, whereas in Singapore, it is not even among the top ten common cancers in the male population.

However, it is still a common urogenital malignancy, second only to carcinoma of the Urinary Bladder.

In the past decade many advances have been made in the management of prostatic carcinoma, and the aim of this paper is to review some of these advances in the light of our local experiences with this disease, and to introduce some of these advances where possible, in the treatment of our patients locally.

MATERIAL AND METHOD

From July 1976 to June 1981, over a period of 5 years a total of 46 cases of carcinoma of prostate were available for study. The Clinical presentations and significant investigations were extracted from the records, and the histopathology was confirmed and the grading reviewed.

RESULTS & DISCUSSION

Age incidence: (Fig. 1) The age of the patients varied from 51 to 88 years, the commonest age group being the seventh decade of life.

Clinical Presentations

The commonest clinical presentation is that of acute retention of urine in 58.7% of cases only half the number had complain of associated symptoms of bladder outlet obstruction. 28% presented with symptoms of bladder outlet obstruction without acute retention. Only one patient presented with haematuria alone but 13% of patient had haematuria associated with the other symptoms of bladder outlet obstruction.

15.2% of patients presented by way of metastasis to the bones and it is interesting to note that in two cases (4%) the main presenting complaints were that of generalised malaise and weight lost with enlarged supra-clavicular lymph nodes.

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Staging And Grading Of Prostatic Carcinoma

To manage prostatic carcinoma properly, staging and grading of the disease is important. We find the staging system, as proposed by Whitmore 1956 (1) and used widely in the United States more practical than the international staging using the TNM system.

39.1% of patients were found to have metastatic disease — stage D when first presented, while another 21.7% had locally advanced disease with tumour extending on to the seminal vesicles or infiltrating the trigone of the bladder on endoscopy (Stage C). 30.5% had tumour confined to the prostate gland (Stage B) while 8.7% of patients were stage A tumour whose carcinoma was not suspected clinically or at endoscopy, and only histology showed them to be carcinoma.

In general, there is good co-relation between the grading and staging of the carcinoma. The majority of our patients, 76.1% had poorly differentiated (Grade III) adenocarcinoma. And 13% had moderately differentiated (Grade II) adeno carcinoma. And these were associated with advanced disease. There were 3 patients (6.5%) with undifferentiated carcinoma (Grade IV).

Corelation of serum acid and alkaline phosphatases with staging of the disease: (fig 2 and 3).

Taking the normal serum acid phosphatase as 5 I.U., patients with stage A and B disease had normal acid phosphatases, while those with stage C and D disease, where the tumour had extended beyond the confine of the prostate gland had raised acid phosphatases, a good number of them had normal acid phosphatases as well. Thus raised acid phosphatase usually indicates extensive disease, though a normal value does not exclude metastatic disease.

Many patients with stage A and B disease had raised alkaline phosphatases as well, however, in stage D disease, all patients had raised alkaline phosphatase and none had normal value. Thus a normal alkaline phosphatase can probably exclude metastatic disease.

Therefore, in combining both the acid and alkaline phosphatases levels in patients with carcinoma of prostate, it is possible to predict which patients are more likely to have metastatic disease and which have not. This has an important bearing in the clinical staging and further management of prostatic carcinoma.

The other value of doing acid and alkaline phosphatases levels is to monitor the response of the carcinoma to treatment.

Treatment

Protactectomy: 45 patients had transurethral resection of the prostate at sometime during the course of their disease. 6 had open-prostatectomy done previously when carcinoma was not suspected. In general, if carcinoma of prostate is suspected as a cause of bladder outlet obstruction open-prostatectomy is contraindicated. Transurethral resection is the method of choice. An adequate channel is resected, and good specimen can be obtained for histopathology as well.

Stilbesterol: Early in the series, low dosage stilbesterol 1 mg three times daily was used indiscriminately for all cases of carcinoma. Now we are more selective in view of its cardio-casular effects even at low dosages (2,3), 40 patients were given stilbesterol, 2 developed deep vein thrombosis and one had a mild cardio vascular accident as well. This was a 65 years old patient with stage A Grade II disease, first diagnosed in 1976 and he was started on stilbesterol, he developed deep vein thrombosis in 1978 and a mild cerebral vascular accident in 1979, after which treatment with stilbesterol was stopped. He had remained well ever since. We now reserve stilbesterol for patients with

disseminated disease.

Orchidectomy: Only 11 patients had orchidectomy done. 6 as a primary procedure at time of diagnosis and 5 patients for relapse after stilbesterol treatment. Initially, orchidectomy was reserved for advanced disseminated disease, and for those patients with associated cardio-vascular disorders. Orchidectomy can have dramatic effect with patient relief of pain over night. With the advantages of absent cardio-vascular side effects and that patient need not have to take drug regularly and that the procedure is a simple one which can be done at the same time as transurethral resection of the prostate, we are now doing this procedure more and more often. It has also been found that early orchidectomy with or without oestrogen has better 5 and 10 years survival rates than oestrogen alone, or without hormonal treatment (4, 5). Contrary to popular belief, patient's acceptance of this procedure is high, though we have a small number of patients who absolutely refused in the belief that the testicles were the source of their lives!

Radiotherapy: Only in the past 3 years had we been making increasing use of curative deep X-ray therapy for stage B and C disease and the results had been encouraging. This form of treatment has now been accepted to be safe and effective (6, 7). 9 patients were treated thus in combination with orchidectomy or stilbesterol. 2 patients had fairly marked side effects of radiation cystitis and one of them absconded and did not complete the full course of treatment. All the patients are doing well, though the follow up periods have been short. In one 60 year old patient

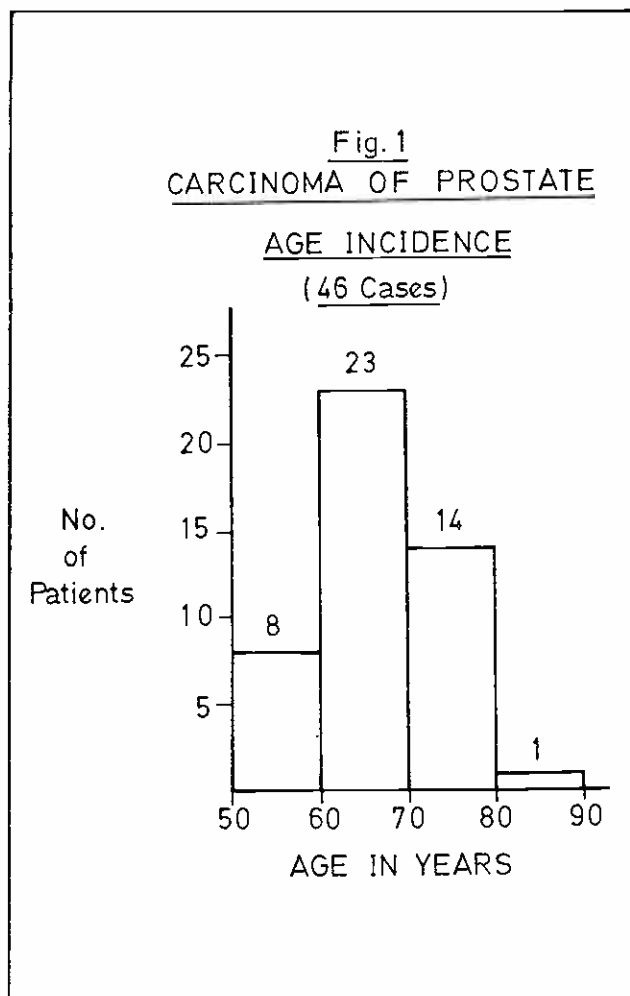


Fig. 1 : Age incidence of prostatic carcinoma.

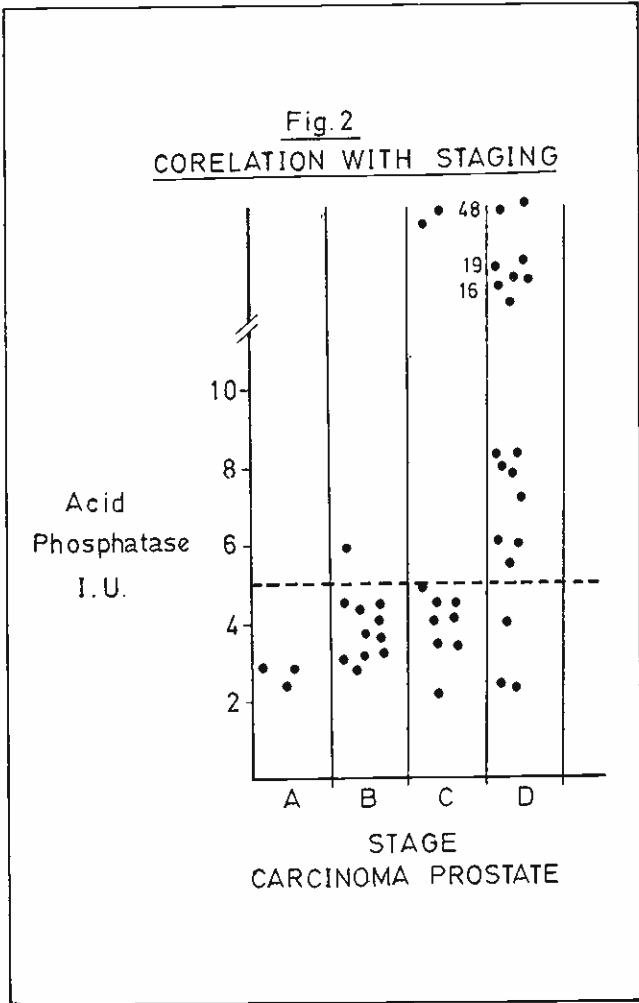


Fig. 2 : Corelation of acid phosphatase with stage of prostatic carcinoma.

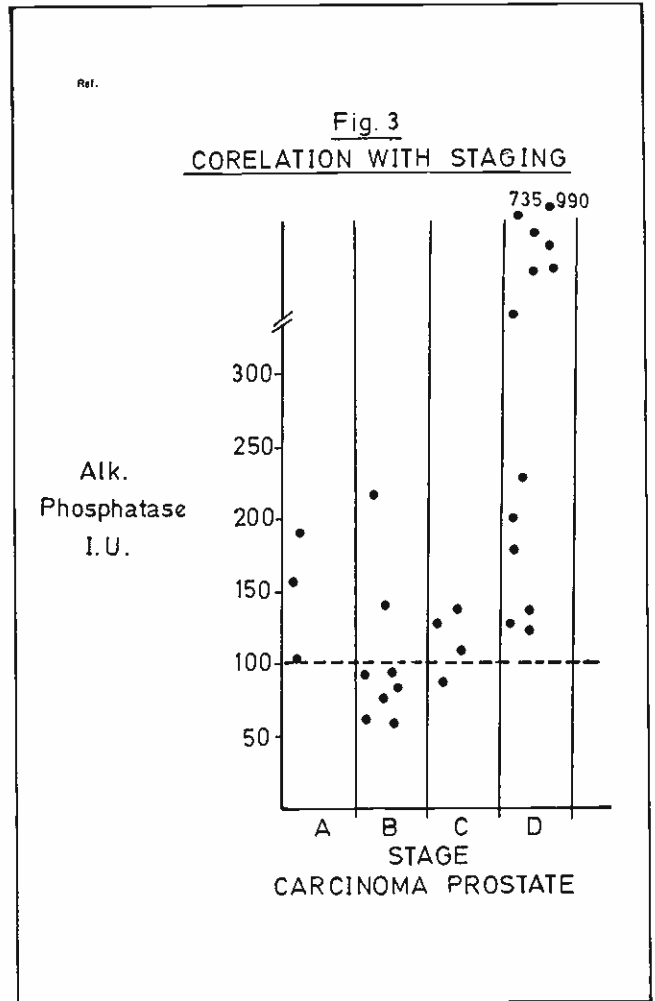


Fig. 3 : Corelation of alkaline phosphatase with stage of prostatic carcinoma.



Fig. 4 : Pre-radiotherapy IVU showing hydronephrotic left kidney with hydroureter and poor functioning of the right kidney due to carcinoma of prostate.



Fig. 5 : Post-radiotherapy IVU showing resolution of the left hydronephrosis and return of function of the right kidney, 3 months later.

who had grade III stage C disease, he had a repeat transurethral resection 6 months after radiotherapy for bladder neck contracture and histopathology revealed no evidence of tumour. Another patient was a 51 year old taxi driver who was much troubled with frequency and difficulty in passing urine. He had a grade III stage C disease, he responded very well not only clinically, but radiologically. His pre-radiotherapy IVU showed bilateral hydronephrosis with poor-functioning of the right kidney (Fig 4) 3 months after a radical course of irradiation, the repeat IVU showed almost normal function and the anatomy of the upper urinary tract was restored to normal (Fig 5).

Another 8 patients were given palliative deep X-ray therapy for bone pain due to metastasis and their response had been variable.

Follow Up Results

Complete follow up of patients had been a problem and therefore it is difficult for us to analyse our survival statistics. Also for a disease of this nature the follow up period in this study is too short.

Of 46 patients, 10 were lost to follow up. 16 were known to have died one week to 10 years after diagnosis. 20 were still being followed up and 14 of them have no symptoms of the disease 5 months to 5 years after initial treatment.

CONCLUSION

With the basic data and experiences we had accumulated over the past 5 years, and from the review of the literature, we have now formulated the following policy for our patients with carcinoma of prostate.

- i) For patients suspected of Carcinoma of prostate, in addition to the usual investigations including IVU, serum acid phosphatase as well as alkaline phosphatase should be done.
- ii) Transurethral resection of prostate is done not only to relieve the bladder out-let obstruction but to obtain adequate tissue for histopathology. Transperineal needle biopsy is occasionally indicated.
- iii) For stage A disease which are well differentiated, no further treatment need be given. For the diffuse moderately to poorly differentiated stage A disease, treatment is as for stage B or C.

- iv) For stage B or C disease, following transurethral resection, removing as much tumour tissue as possible, frozen section biopsy is done. When the diagnosis is confirmed, orchidectomy is avocated at the same time. If on subsequent investigations with enzymes studies and bone scan showing no evidence of metastatic disease, patient is referred for a radical course of radiotherapy.
- v) For stage D disease, provided there is no contra indication, stilbesterol 1 mg three times a day is given following transurethral resection of prostate and orchidectomy. If patient still complain of bone pain following hormonal treatment. Palliative deep X-ray therapy is given.
- vi) Chemotherapy would be considered if all the above have been ineffective but on the whole results of chemotherapy have been poor.

With better organised urological service and a standard policy for the management of this disease, we hope to be able to follow up our patients better and to up-grade the standard of care given.

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