A Sojourn beyond Palliation in Stage IV Prostatic Malignancy D2
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Abstract: This presentation is about an interesting case of clinically, radiologically and histo-pathologically proved, advanced STAGE IV METASTATIC PROSTATIC CANCER with skeletal metastasis involving sternum, 5,6,7th ribs, T9 vertebral body and right acetabulum. Patient’s first presentation was sudden hematuria. The universal treatment approach to such advanced cancer way back in 2012 was hormone therapy (anti-androgen therapy) with simultaneous or sequential chemotherapy. Deviating from the standard palliative protocol, a bold decision was taken to go all out to attempt a cure in this case armed with an innovative self-designed Multi-modality approach. Thus adopting SURGICAL AND CRYOFREEZING techniques, along with simultaneous chemotherapy, Hormone therapy, Immunotherapy and Oral bicalutide and nutritional supplements, a spectacular remission progressing to complete cure was achieved with Tumor marker PSA level touching 0.02ng/ml and PET scan report coming as Normal study. This state of complete remission is perfectly maintained well over 5 years period. There are ample reports of patients surviving for over a decade too without achieving a complete remission, thanks to the diligent management of such cases, but this patient has complete remission with normal tumor marker level even after 5 years, with normal PET scan report, having stopped all medications after 2 years or so. This case may offer an useful insight into the all-out war on advanced STAGE IV cancer with possibility of cure, if not best possible remission and also the excellent utility of Cryo-freezing techniques, which aid in conversion of hitherto declared inoperable cases as in this case to operable ones by its diligent use. This approach puts up a question WHY NOT TRY FOR CURE IN STAGE IV CANCERS. We may succeed in many. This claim is not based on this single case but on reaping benefits in more than 6, such advanced cases.

Keywords: Metastatic prostate cancer, Bone metastasis, skeletal metastasis, stage iv cancer, prostate cancer, cryotherapy, multimodality approach, maximal cytoreduction, inoperable cancers.

INTRODUCTION
Prostate cancer is one of the most common malignancies in men. It is stated that only 6 percent patients with prostatic cancer have metastatic disease at first diagnosis but 90 %of such metastatic bone affected patients surely end up in death. Protocols are evolved every now and then in its management, but all focused on palliation only and content to pull on their life laboriously and miserably with a heavy tumor load existing throughout the treatment period. The tumor marker levels dipping momentarily in such cases, to normal values or near normal values and then bouncing back to elevated levels despite continuing treatment. A sincere attempt was made to break the myth that in stage iv cancers, only palliation is possible. This attempt was graciously and miraculously rewarded in this patient, whose multiple bony metastases too vanished with no trace, his PSA level almost reaching nadir and maintaining below 0.2 ng/ml throughout 5 year period. This stupendous feat was achieved by adopting a multimodality approach, with surgery and cryofreezing as the first procedure followed immediately with a galaxy of other treatments like chemotherapy, Hormone therapy, Immunotherapy etc. Of late improved treatment with innovative medicines and procedures has evolved over a decade and which are yielding better remission and survival. The sterling among them are, Abiraterone, Enzalutamide representing Hormone therapy; Mitoxantrone, Estramustine, Cabazitaxel in addition to Docetaxel representing Chemotherapy; pegylated Interferon alpha 2b, Interleukin, Monoclonal antibodies, vaccines, Sipuleucel-T representing Immunotherapy; Denosumab, Bisphosphonates, Zoledronic acid , Radium 223,intended for tackling bone metastatic related issues etc. These have helped in effecting better remission. Slowly there is an enlightenment and appreciation of adopting multimodality approach which yields better clinical results compared to previous strategy of single modality treatment.
CASE REPORT

Mr. Jaikrishna, aged about 59 years, native of Bangalore city, had developed hematuria and was initially admitted in MALLIGE hospital, Bangalore on 3/4/2012. Transrectal biopsy was done there, with the report coming as adenocarcinoma, Gleason Grade 1+2. PSA was more than 100 ng/ml. He was referred to HCG super specialty hospital, PET Scan done there on 10/4/12 revealed advanced Prostatic carcinoma with multiple bone secondaries in sternum 5, 6, 7, th ribs on the right side, T9 vertebral body, and right acetabulum. Patient came to me after being given a bleak prospect by oncologists at HCG hospital, who had declared the case as inoperable and that would be adopting only Anti-Androgen therapy first.
Patient was taken under my care on 11.4.12 and subjected to the following procedures the next day. Under spinal anaesthesia bilateral orchidectomy was done followed by Deep Cryo Freezing of the malignant prostate gland reached via Supra pubic approach, positioning the cryo tip in the prostatic urethra. After 20 minutes of deep freezing with liquid nitrogen gun, the cryo probe was withdrawn. Trans-urethral and suprapubic Foley’s catheter were placed in the bladder and wound closed in layers. Patient was started on Inj. Interferon α2B for Immune potentiation. A week later he was given chemotherapy, Inj. Docetaxel with usual precautions and monitoring. Biweekly Inj. Honvon and daily oral Bicalutide along with nutritional support. Patient was cheerful and healthy all through and his tumor marker values started coming down. Serial PET scans done revealed gradual remission of the bony secondaries. Eventually all the bony metastasis disappeared completely to give a final report that came as NORMAL study. Similarly Serum PSA level also diminished from above 100ng/ml level to a level below 0.2 ng/ml and still remaining around the same level after a period of 5 years.
**BONE SCAN**

**Technique:**
Whole body bone scan was performed by injecting 15 μCi of Tc-99m-labeled MDP intravenously, followed by acquisition of delayed static gamma images using high resolution collimation (Eastman SPECT system).

**Findings:**
The images demonstrate normal increased radiotracer concentration in:
- sternum and Rt. 5th rib (posteriorly),
- both scapulae
- both sacroiliac joints

Diagnostic changes are seen in bilateral shoulder and sternoclavicular joints.

**Impression:**
- Persistent abnormal osteoblastic activity in multiple sites as described above.
- Compared to prior study dated 09.06.2012, intensity of the lesions appears slightly decreased.
- No new lesions are seen.

Dr. Mohit R. Nadig M.D. (AIIMS)
Consultant & Chief
Tc-MDP WHOLE BODY BONE SCAN

Pretest: Whole body skeletal scintigraphy was done after 3hrs of IV administration of 2mCi of Tc 99m M.D.P. injection.

Findings:
- Mild increased tracer uptake in D8 vertebra and non specific uptake in 6th left costo-chondral junction.
- Increased tracer uptake in bilateral knee joints (degenerative)
- Rest of axial and appendicular skeleton shows normal physiological tracer distribution.
- Both kidneys are normally visualized.

Impression:

Essentially a normal study.

For CT correlation of dorsal vertebra to rule out metastases.

Dr. Aisha Niaz
Dr. Harish B
SPECIAL BIOCHEMISTRY REPORT

*ANTI TPO (Anti Microsomal Antibodies/Thyroperoxidase) (ECLIA)*

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Reference Range</th>
</tr>
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<tbody>
<tr>
<td>Adults</td>
<td>&lt; 34.0 IU/ml</td>
</tr>
<tr>
<td>Children</td>
<td></td>
</tr>
<tr>
<td>0 - 6 days</td>
<td>&lt; 117.0 IU/ml</td>
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<tr>
<td>&gt;6 days</td>
<td>&lt; 47.0 IU/ml</td>
</tr>
<tr>
<td>&gt;3 - &lt; 12 months</td>
<td>&lt; 32.0 IU/ml</td>
</tr>
<tr>
<td>&gt;1 - &lt; 6 years</td>
<td>&lt; 13.0 IU/ml</td>
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<tr>
<td>&gt;6 - &lt; 11 years</td>
<td>&lt; 10.0 IU/ml</td>
</tr>
<tr>
<td>&gt;11 - &lt; 20 years</td>
<td>&lt; 26.0 IU/ml</td>
</tr>
</tbody>
</table>

1. Due to individual variability it is possible that a normal patient with no history of thyroid disease may have reproducible elevated values > 35.0 IU/ml therefore, please consider these limits as guidelines only.

2. For diagnostic purposes anti tpo results should be used in conjunction with other test results, the overall clinical presentation and other appropriate information.

**TOTAL PROSTATE SPECIFIC ANTIGEN (ECLIA)**

TOTAL PROSTATE SPECIFIC ANTIGEN 0.02 ng/ml (ECLIA)

<40 YRS : Up to 1.4 ng/ml
40-49 YRS : Up to 2.0 ng/ml
50-59 YRS : Up to 3.1 ng/ml
60-69 YRS : Up to 4.1 ng/ml
> 70 YRS : Up to 4.4 ng/ml

Serum PSA concentrations should not be interpreted as absolute evidence for the presence or absence of malignant disease, nor should serum PSA be used alone as a screening test for malignant disease. For diagnostic purposes, the results obtained by immunometric assay should always be used in combination with the clinical examinations, patient medical history and other findings.

--- End of Report ---

Dr. Shailendra V K (MD)
Biochemist
KMC: 55107
 Reported On: 05/09/2015 11:07:
(Because of cryofreezing of the primary prostate gland, the gland remained as such but the malignant cells in it had disappeared. This USG picture post cryofreezing (done in 2012) signifies this point that cryofreezing helped only in tumor eradication without disturbing the prostate feature.)

DISCUSSION

In stage IV cancer of prostate international statistics predicts less than 40% survival at 1 year and 1% survival at 5 years. American National Cancer institute says that there is no cure for prostatic cancer that has metastasized. A study by Harvard Medical school states that there is high risk of biochemical recurrence of about 85% within 5 years, if PSA levels on first diagnosis was greater than 20ng/ml and cancer stage of T2b, but in this case patient had PSA level more than 100 ng/ml, also stage of the disease being stage IV, with skeletal metastasis in which case biochemical recurrence should be between 95 to 100% within 5 years. It is also postulated that ideally, post treatment PSA level should be less than 0.5 ng/ml but according to most statistics this is rare to achieve. Usually a PSA of 0.6 to1.4 is graciously accepted as sufficient. Universally, the prevailing treatment modality in metastatic prostatic carcinoma is palliative only, aiming for an overall survival of 24 to 36 months. The American approach involves androgen suppression. However after a varying period, most patients develop a hormone refractory state. Thus hormone suppression therapy’s curative potential is limited because of the inability of the medicine to eradicate all clones of prostatic cancer cells like androgen dependent and androgen independent clones.

The European association of Urologists also advocates mono therapeutic androgen deprivation as standard protocol and using chemo medicine Docetaxel for hormone refractory cases. Literature is aplenty with such metastatic prostatic cancer being given very good amelioration only to face scenarios like early biochemical recurrence, clinical relapse, hormone refractory state, drug intolerance, therapeutic failure, extreme morbidity, and even mortality due to extensive metastasis in critical areas

Although chemotherapy and hormone therapy arena has vastly improved, still they are incapable of giving permanent remission or cure. So adopting them as the primary line of management in advanced malignancy is not the real ideal means. In cases that turn out to be chemo resistant or hormone resistant, the treating physicians and the patients face a Jericho’s wall, to scale and hence loose the race.

So in pursuit of better management option which could yield better clinical results, I was forced to deviate from the routine protocol, in this stage iv cancer patient. First Bilateral Orchidectomy was done ,an easy procedure that could aid anti androgen therapy, and along with it, by a supra pubic approach, Prostate gland was deep cryo freezeed, a procedure which is of least

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lethality when compared to radical prostatectomy or radiotherapy to prostate gland, but achieving better cytoreduction with negligible morbidity and tumor spread. These simple measures in turn aided the patient to remain healthy throughout. Administering Chemodrug Docetaxel along with chemo protectants resulted in maximal clinical efficacy with literally zero side effects. There was not the neutropenia, anemia etc, due to bone marrow suppression, no gastro intestinal, nor renal, or central nervous system complications, no hair fall. All strikingly absent as if no chemotherapy was given.

In addition to above, injection interferon for immune potentiation, injection Honvon and oral Bicalutide were also utilized. This was the deviated strategy adopted for this patient. Instead of mere palliation that could have been achieved by protocol procedure, a near cure status with stunning clinical results was the outcome. So it becomes a necessity that a diligent surgeon need to overstep the theoretical yard sticks of inoperability and pre fixed protocols of management in suitable patients to reap better soul satisfying results as seen in this case. Here I would like to postulate that the primary factors that should have contributed to this clinical achievement must be:

- Adopting cryofreezing to tackle the primary lesion, the prostate gland. By cryo freezing we achieve, maximum possible cytoreduction without the chemical toxicity as with chemotherapy, without the radiation hazards, which are the most two potent factors that literally destroy our immune system to such extent that any future contribution from them in inhibiting the tumor growth by our NK cells is rendered insignificant. Also the advantage of cryofreezing is that they are always useful, and never fail in their cytoreductive effect, if properly done, even in any grade and type of malignancy irrespective of whether the tumor is chemosensitive or chemo resistant, radiosensitive or resistant.

- By administering chemotherapy in a different mode that is, low dose high frequency method, along with chemo protectants, the possibility of the chemo medicines targeting our immune cells and the bone marrow cells is kept to a minimal extent.

- Though chemotherapy and hormone therapy can give a good amelioration for varying periods, I feel, it must be the unharassed immune system of the patient, that should have been stimulated by the offering of frozen malignant cells, an avirulent antigen, resulting in a positive immune response, that should be the secret of this clinical success. This requires high end research labs for confirming.

- So in advanced malignancies, instead of ignorantly or egoistically, clinging on to protocol guided approach, and content to give our patients just palliative therapy with unsatisfactory clinical outcome, why not adopt multimodality approach to give them better survival, better clinical results or even possible cure.

- This observation of mine has been reinforced by two current studies which had adopted, a multimodality approach of different combinations.

A recent study at Sloan Kettering cancer center in Newyork city by L.Scher MD Chief of Genito urinary oncology has postulated that sequential use of three different modalities helped in achieving a high level of success in stage iv prostatic cancer. Their procedure involved with the androgen deprivation therapy, radical surgery including retro peritoneal lymphnode dissection, radiation therapy to all visible metastatic bone lesion etc. Though the procedure is elaborate and requires the service of experienced surgeons to accomplish radical surgical procedures, and services of expert radiation oncologists, still the result seem to be very encouraging [1].

Another pilot study by Mattew J, O Shaughnoosy et al. also utilizes multimodal approach that included androgen deprivation, Radical prostatectomy and Radical pelvic node dissection and stereotactic body radiotherapy to all osseous lesion or in certain cases to the primary prostatic region, resulted in better clinical outcome than mere androgen deprivation treatment alone. These studies prove my point that multi-modality approach is far superior to previous modes of treatment [2].

The differences between these current studies with superior approaches and superior medicinal support and my approach is that my approach is very simple. The necessity for radical surgery and the lethal radiation therapy was not at all required, thanks to the efficacy of cryofreezing of the primary.

CONCLUSION

Prostatic stage IV cancers and for that matter any stage IV cancers are universally considered as incurable and hence only palliative procedures are adopted. Why should it be so? Why not try an alternative approach which can give better results if not even complete cure? This enthusiasm and innovative instinct led to this astounding clinical success. Recently the medical fraternity is catching up with this idea of multimodality approach with excellent innovations giving a helping hand. Still the medical fraternity has not begun to utilize the best available tool for maximum cytoreduction.ie) the cryofreezing. Instead they are using exorbitantly costly medicines and extremely morbid radical surgeries and extremely debilitating Radiation therapy to achieve the purpose of maximal cytoreduction. To sum up the positives that were glaring and not clinically expected or achieved so far considering the advanced stage the patient was on first diagnosis, are
Patient was cent percent fit and healthy, throughout the treatment period, lasting a few months.

No post-surgical complications despite the adventurous cytoreductive cryofreezing of the malignant prostate gland.

No chemotherapy related, Hormone therapy related, nor Immunotherapy related side effects ever occurred.

Complete remission of even bony secondaries as per PET scan report.

Patient is not surviving with incomplete remission, but living healthy with complete remission. All these feats achieved by simple treatment procedures, no radical surgery, no radiation therapy even for the bony metastasis, no expensive or sophisticated treatment like Targeted therapy etc.

My message through this article is

- Individualize patients, and device strategy to each of them.
- Override protocols if it would do well to the patient.
- Never undermine the health and immune system of the patient by reckless chemotherapy, Radiotherapy and radical surgical procedures.
- Never neglect cryotherapy, The Game Changer, where ever feasible for, with cryo tool, there is nothing like inoperable tumors.
- Maximum possible cyto reduction with cryo is worth more than the best chemotherapy for it does not cripple one’s immune system, but may work as a catalyst in stimulating it.

A Therapeutic overkill, if you want to call this approach is humbly accepted, but it is far superior than condemning the patient to protocol guided palliative therapies with inferior clinical results, or even mortality.

The present therapeutic success adopting multimodality approach vindicates my point of contention.

REFERENCES