

Effect of combined sequential treatment of Sipuleucel-T followed by Enzalutamide in metastatic chemo-naïve castration resistant prostate cancer: Results of a single center of large urology group

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Introduction

- Sipuleucel-T is the first autologous cellular vaccine approved by the FDA for the treatment of asymptomatic or minimally symptomatic metastatic castrate resistant prostate cancer (mCRPC).
- Enzalutamide was approved in the treatment of post-chemotherapy mCRPC patients in August of 2012, while pre-chemo approval was granted in September of 2014..
- The results of the IMPACT trial demonstrated that immunotherapy as monotherapy is not sufficient enough to hinder or stop progression of mCRPC especially with high baseline PSA level.
- The timing and sequencing of combination therapy is becoming of utmost importance for the treatment of these patients.

Objective

- To evaluate the effect of using sequential Sipuleucel-T immunotherapy followed by Enzalutamide for mCRPC.

Methods

- We collected data of 84 patients with chemo-naïve mCRPC treated with Sipuleucel-T at our practice from September 2011 to January 2014.
- Prior to initiation of treatment, baseline status was recorded for all patients.
- We then selected and analyzed outcomes of 19 patients who received sequential Enzalutamide treatment after completion of Sipuleucel-T.
- The average timing for the initiation of Enzalutamide was 2.5 ± 1.6 months after completion of immune therapy. We believe this to be a very unique cohort as all of these patients were treated with Enzalutamide off label (i.e. pre-chemotherapy).

Results

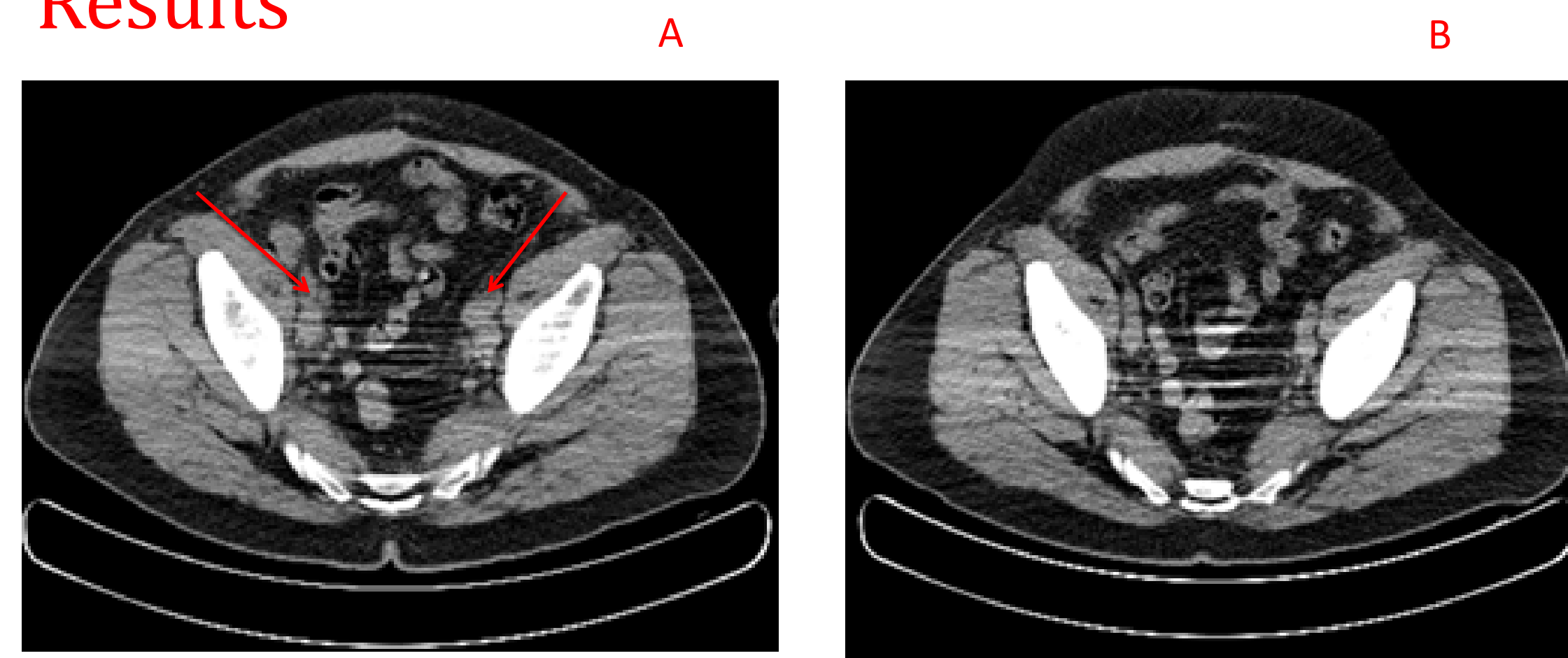


Fig.2. Sodium Fluoride CT/PET scan :
A- diffuse bone metastatic disease before treatment,
B- regression of many lesions 10 months after therapy.



Fig. 1. CT pelvis :

A- pelvic lymph nodes enlargement (red arrows) before treatment,
B- regression of nodes 10 months after therapy.

- Median time of Enzalutamide therapy was 5.4 months (range: 1-13).
- In our cohort of 19 patients:
 - 1 case showed radiographic full regression of metastatic lesions in bone, lung, and lymph nodes (Figure 1).
 - 1 case showed radiographic full regression of bony metastatic lesions.
 - 2 cases showed a partial regression radiographically of bony metastatic disease (Figure 2).
 - 13 cases showed stable disease according to RECIST-criteria.
 - 2 patients were deceased due to progression of mCRPC.

Discussion

- The patients with full and partial response were in the lowest quartile of our cohort as defined as $PSA \leq 3.87$ ng/ml.
- On the contrary, all cases of progression and death were documented in highest (last) quartile as defined by a PSA level greater than 84 ng/ml.
- To our knowledge, this will be the first case of complete radiographic regression of lung, bone, and extensive lymph node disease.

Conclusion

- Our experience demonstrates a promising effect using sequential Sipuleucel-T immunotherapy followed by Enzalutamide for mCRPC. Currently there are studies underway that will hopefully validate our experience with using Enzalutamide at the initiation of Sipuleucel-T.