Transforming nmCRPC into mCRPC

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CASE REPORT

A 70 year old male diagnosed with prostate cancer, Gleason 9 (4+5), DRE T2b and PSA 6.3 ng/ml. A **radical prostatectomy with lymph node dissection was performed on March 2017**.

Pathology reports informs: pT3 N0 (0/11 nodes and extraprostatic extension).

Adjuvant 3D Radiotherapy was performed (70 Gy) reaching a PSA nadir of 0.01 ng/ml in November 2017.

On May 2018 the patient developed biochemical recurrence: PSA 3.4 ng/ml. Androgen deprivation therapy with LHRH agonist was started.

On October 2018 PSA levels were under 0.05 ng/ml and on May 2019 PSA under 0,03 ng/ml (testosterone 0.12 ng/ml)

On August 2020 PSA started to rise from 0.08 ng/ml and on November 2020 PSA reached 0,23 ng/ml (testosterone 0.10 ng/ml). **PSA doubling time shorter than 10 months (nmCRPC).**

On January 2020 a PSMA PET-CT was performed (Figure 1).

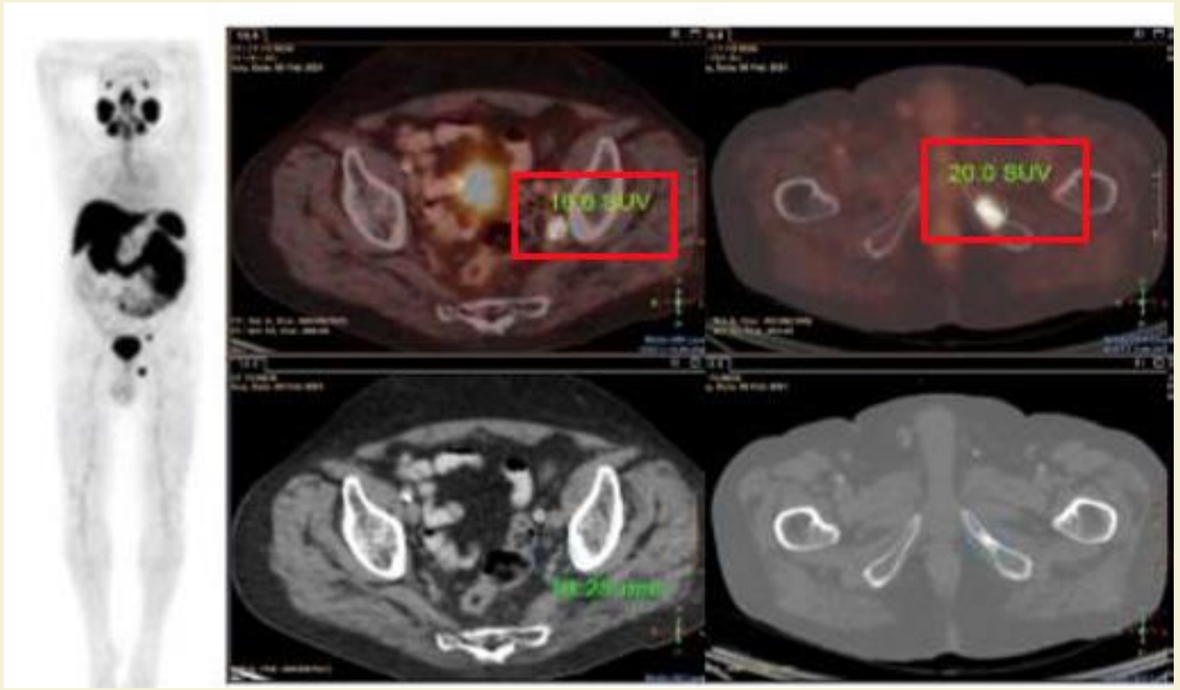

Figure 1: nmCRPC, PSA 0,23 ng/ml, after radical prostatectomy and salvage rediotherapy (Maximun Local treatment). PSMA PET-CT shows bone and nodal cancer involvement.

TREATMENT

As first line treatment for mCRPC patient we decided to start on Enzalutamide **+ Denosumab**

DISCUSSION

Not all nmCRPC are equal, and if we use PSMA PET-CT the possibility of finding metastatic cancer varies (Table 1)

POSSIBILITY OF BEING M1 ACCORDING TO PREVIOUS THERAPIES

Hormonal blockade	Prostate radiotherapy	Radical prostatectomy	Local management + salvage	M1 probability	Image sugested
✔	✘	✘	✘	Very low	Scintigraphy + CT
✔	✔	✘	✘	Low	Scintigraphy + CT
✔	✘	✔	✘	High	PET
✔	✘	✔	✔	Very High	PET
✔	✔	✔	✘	Very High	PET

Table1: Possibility of metastasis according to previous treatments in nmCRPC and suggestion of image to use

COMMENT

In Spartan[1] and Prosper[2] trials, the incidence of fractures reaches up to 18% and Darolutamide is not available in Argentina.

With the PSMA PET-CT, we "transformed" this patient into a mCRPC one and we could treat him with a better bone protection therapy (Denosumab 120 mg every 4 weeks or Zoledrinic acid 4 mg every 4 weeks).

References:
1) Smith MR, et al. Apalutamide and Overall Survival in Prostate Cancer. Eur Urol (2020).
2) Cora N. Sternberg, M.D., Karim Fizazi, M.D., Ph.D., Fred Saad, M.D., Neal D. Shore Enzalutamide and Survival in Nonmetastatic, Castration-Resistant Prostate Cancer.NEngl J Med 2020; 382:2197-2206.