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Clioquinol Zinc Ionophore for Terminating Advanced "Decreased Zinc" Testosterone-Dependent Prostate Cancer: A Case Report

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ABSTRACT

In 2019, Costello et al. published the first successful treatment Case Report of a patient who presented with testosterone-dependent prostate cancer. That cancer is a "decreased-zinc" malignancy. The treatment was clioquinol zinc ionophore (3% Clioquinol Cream), which terminated the patient's malignancy.

This second Case Report corroborates the 2019 Case report in employing clioquinol to terminate testosterone-dependent prostate cancer in patients. The two patient cases provide evidence that clioquinol will likely be effective for other patients. Now, oncologists and urologists have efficacious systemic chemotherapy for their testosterone-dependent prostate cancer patients. Then, for the first time, many or most of the 314,500 men in the U.S., and the 10 million men worldwide, who die of prostate cancer every year, can now be treated with clioquinol and cured of that cancer. We must make it happen.

Keywords: prostate cancer; testosterone cancer; prolactin cancer; treatment; clioquinol; cabergoline

INTRODUCTION

The Costello et al. 2019 case report [1], for the first time, identified a cure for a patient with testosterone-dependent prostate cancer; a "decreased zinc" malignancy. The treatment is clioquinol zinc ionophore; which binds zinc in the blood plasma and produces ZnClioquinol. The ZnClioquinol is transported to the testosterone-dependent malignant sites and releases its zinc into the malignant cells, which induces cytotoxicity that terminates the testosterone-dependent prostate cancer.

This second case report confirms the efficacy of clioquinol in another patient with testosterone-dependent prostate cancer. That corroboration is essential to employ clioquinol as the treatment for all or most patients with advanced testosterone-dependent prostate cancer.

PATIENT JG CASE REPORT

The following is the case report that I received from a patient in Sweden and was asked to review and provide an assessment. The case presents the chronology of events. Added are "*italicized comments*" of the Author. The

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intent of those comments is to provide relevant information for the benefit of the Reader. The patient is referred as "JG" to maintain anonymity.

March 27, 2019: F-PSMA/PET scan detected a localized malignancy at the periphery of the prostate gland. The scan was negative for lymph nodes or bone metastases.

F-PSMA/PET scan (Prostate-Specific Membrane Antigen) is specific and sensitive for the identification of prostate gland malignancy and for prostate metastatic sites.

October 9, 2020: PSA=2.71.

By itself, PSA=2.71 does not establish the presence or absence of prostate cancer in patients. The positive March 27, 2019 PSMA and the PSA=2.71 indicate the confined presence of the localized prostate malignancy.

December 8, 2020: PSA=2.23.

Several conditions are known to cause the expression of PSA (BPH; prostate inflammation; prostatitis; urinary infections). However, the PSA=2.71, PSA=2.23, and PSMA-positive scans, together are consistent with the identification of localized prostate gland malignancy. However, it is unusual for untreated localized cancer to persist for about 13 months.

December 8, 2020–January 7, 2021: Casodex (50 mg/day).

Casodex (bicalutamide) is an anti-androgen receptor agent that is employed for the treatment of testosterone-dependent prostate cancer. It suppresses the progression of the malignancy; however, it does not terminate the malignancy.

January 7, 2021: PSA=1.00; Prolactin=16.0. Cabergoline (0.25mg twice weekly) + Casodex

The PSA=1.0 indicates the success of the 30-day Casodex treatment in arresting prostate malignancy.

However, the implication of prolactin is perplexing. It raises the issue of the existence of prolactin-dependent prostate cancer. Unlike "decreased zinc" testosterone-dependent prostate cancer, prolactin-dependent prostate cancer does not exhibit any identifying biomarkers. Then why is the plasma prolactin concentration determined; which was in the normal range for men? Why was cabergoline the treatment for a patient with normocitricemia? It is the treatment for hyperprolactinemia patients with pituitary prolactinomas. Cabergoline inhibits the prolactin production and secretion of those adenomas. That results in hypoprolactinemia, which suppresses and ultimately terminates prolactin-dependent prostate cancer. In the absence of any evidence in the case report, the patient and/or his oncologist were knowledgeable of prolactin-dependent prostate cancer. It is likely that cabergoline was employed to protect against the development of prolactin-dependent prostate cancer in the patient. The cabergoline treatment achieves that prevention.

9th March 2021: PSA=0.68; Prolactin=3.0. Cabergoline + Casodex

Casodex is reducing the PSA-secreting testosterone-dependent malignancy and prevents the recurrence of testosterone-dependent prostate cancer. Prolactin=3.0 ng/ml demonstrates the Cabergoline inhibition of the pituitary production of prolactin.

June 2, 2021: PSA=0.73, Prolactin=2.3. Cabergoline + Casodex.

The successive PSA=1.00, PSA=0.68, and PSA=0.73 values indicate the Casodex arrest of the patient's testosterone-dependent malignancy. However, another PSMA scan would be advisable to establish the absence of prostate malignancy. The Prolactin=2.3 ng/ml is the result of the cabergoline treatment.

July 3, 2021: Cabergoline; 3% Clioquinol Cream; Casodex.

3% Clioquinol Cream is the treatment for the "decreased zinc" testosterone-dependent prostate cancer. The Cream is applied to the skin and massaged into the dermis; the clioquinol enters the blood plasma to produce ZnClioquinol; which is circulated to malignant sites. The Zn is then transported into the malignant cells and induces its cytotoxic effects, which terminates testosterone-dependent prostate cancer.

August 2, 2021: PSA=0.62; Prolactin=1.1. Cabergoline; 3% Clioquinol Cream; Casodex; Vitex;

40 mg ZnPicolinate/day. Circulating Tumor Cell Count=0.

PSA=0.62 is indicative of clioquinol treatment efficacy in terminating "decreased zinc" testosterone-dependent prostate cancer. Prolactin=1.1 ug/ml is a 90% decrease due to cabergoline inhibition of the pituitary production of prolactin. That hypoprolactinemia prevents the development of prolactin-dependent prostate cancer.

ZnPicolinate is an over-the-counter zinc supplement to maintain sufficient plasma zinc for the formation of ZnClioquinol. Vitex is an over-the-counter agent that is employed to prevent prolactin production from agents such as estrogen, dopamine antagonists, serotonin, histamine, opioids, and other agents. That could result in the development of recurrent or new prolactin-dependent prostate cancer. The Vitex is taken daily to supplement the protective effect of cabergoline.

The Circulating Tumor Cell Count=0 reveals the absence of circulating metastatic cells. That demonstrates the efficacy of clioquinol and cabergoline treatment for the termination of advanced prostate cancer in patients. However, a CTCC count should be conducted prior to clioquinol treatment and 6 weeks

following treatment. Then, the existence of metastases prior to treatment would result in a CTCC such as 5.4; which predicts impending patient death within 10-12 months. Then, the CTCC count=0 would confirm the efficacy of clioquinol treatment. That is the result for the patient in the 2019 case report.

September 17, 2021: PSA=0.60; Prolactin=0.9. Casodex; Cabergoline; Clioquinol

The low PSA and prolactin values show the continued absence of malignancies in the patient.

October 18, 2021: PSA=0.48; Prolactin=0.9. Casodex; Cabergoline; Clioquinol

Continued evidence of the efficacy of the chemotherapies.

March 9, 2022: Patient JG advises Dr. Costello that he has had no discomfort in his groin or any other symptoms of malignancy.

That is 5 months since August 2, 2021, CTCcount=0. The Patient's statement of "no symptoms of malignancy" is an important indicator that he is cured of prostate cancer malignancy.

May 3, 2022: PSA=0.99; PRL=1.6 ng/ml; Casodex; Dostinex; Clioquinol; ZnPicolinate.

The low PSA and prolactin levels are continued evidence of the efficacy of clioquinol and prolactin; if it existed in the patient.

June 3, 2022: PSA=0.77; PRL=1.1 ng/ml; Casodex; Dostinex; Clioquinol; ZnPicolinate.

The values continue to exhibit the efficacies of the treatments. From September 17, 2021–June 3, 2022 (about 7 months), all indicators confirm that the patient is cured of testosterone-dependent prostate cancer.

July 5, 2022: Patient JG advises that he has no clinical symptoms in the groin or lower abdomen and that he feels well.

That is additional confirmation that the patient is cured.

DISCUSSION AND CONCLUSION

It is noteworthy that in 1999, 42 years ago [2], Liang et al. identified 2 types of prostate carcinoma cells: LNCaP cells and PC-3 cells. The LNCaP malignant cells developed as "decreased zinc" testosterone-dependent prostate cancer cells that are susceptible to cytotoxic effects of physiological zinc treatment. The PC-3 malignant cells developed as androgen-independent malignant cells (now recognized as prolactin-dependent prostate cancer cells) which are not "decreased zinc" cells. They are not susceptible to zinc-induced cytotoxicity.

Another important difference is the identification of testosterone-dependent prostate cancer via its secretion of PSA (Prostate-Specific Antigen) and via PSMA scan (Prostate-Specific Membrane Antigen). In contrast, prolactin-dependent prostate cancer does not exhibit any identifying biomarkers. The only procedure for its presence or absence is an MRI of PSA/PMSA-negative patients. An MRI detection of malignancy is indicative of prolactin-dependent prostate malignancy. That is confirmed by cabergoline treatment for 6 weeks, Then, another MRI should be negative. If the MRI is positive, the patient has another type of malignancy. This is a lengthy, costly, and necessary process to prevent patient deaths due to prolactin-dependent prostate cancer.

This case report corroborates the 2019 case report regarding the successful clioquinol treatment of patients with "decreased zinc" testosterone-dependent prostate cancer. Together, the reports corroborate the efficacy of clioquinol treatment for terminating that malignancy and curing patients of prostate cancer. However, an important difference is the issue of prolactin-dependent prostate cancer. The patient in the 2019 case, exhibited testosterone-dependent and prolactin-dependent cancer by the procedures described above. That case was the discovery of prolactin-dependent prostate cancer.

The conditions, in this case, did not establish the presence or absence of prolactin-dependent prostate cancer. The cabergoline treatment of the patient would terminate that malignancy if it were present. Otherwise, the patient unknowingly would have died of prolactin-dependent prostate cancer. That is the reason for my reference of prolactin-dependent prostate cancer as the "*silent killer*" that is responsible for most of the deaths due to prostate cancer.

The most important conclusion from these cases is that there are efficacious chemotherapies for both prostate cancers: clioquinol zinc ionophore for testosterone-dependent prostate cancer; cabergoline prolactin agonist for prolactin-dependent prostate cancer. Now, most of the 314,500 men in the U.S. [3] and the 10 million men worldwide [4] who are expected to die every year, for the first time, have efficacious chemotherapies to terminate their prostate cancer malignancies. It must be achieved!

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