

THE ROLE OF GA-68 PSMA PET / CT IN EVALUATING RESPONSE TO DOCETAXEL THERAPY IN CASTRATION RESISTANT PROSTATE CANCER PATIENTS

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Introduction - Purpose : Objective: The first treatment option for advanced stage prostate cancer is to stop the action of androgens in the body, either medically or surgically. The testosterone levels at the castration level refer to the definition of castration-resistant prostate cancer (KDPK) when PSA increases or new metastases develop. In this case, the chemotherapy regimen containing docetaxel is usually tried first. Anatomic imaging methods and bone scintigraphy are inadequate to evaluate the response to docetaxel. In this study, the contribution of Ga-68 PSMA PET / CT in assessing response to docetaxel treatment was investigated.

Methods - Tools : Methods: We performed Ga-68 PSMA PET / CT imaging in 24 patients with CAPD before docetaxel treatment. Patients who were all metastatic were treated 4-6 times with docetaxel. Patient control Ga-68 PSMA PET / CT imaging was performed to evaluate the response to treatment. Pre- and post-treatment involvement areas were assessed semiquantitatively and anatomically, as well as visual evaluation, when necessary, with SUV measurement.

Findings : Findings: In the pre-treatment Ga-68 PSMA PET / CT, pelvic lymph node metastases in 14 patients, distant lymphatic metastases in 18 patients, skeletal system metastases in 18 patients and visceral organ metastases in 6 patients were detected in 14 patients as well as intense prostate loops in all patients. In the evaluation after treatment, 16 (66%) of 24 patients were evaluated as progreses disease by increasing number, size and Ga-68 PSMA involvement or developing new lesions. One of the other eight patients had stable disease, and seven had minimal or partial regression.

Discussion : Conclusion: Ga-68 PSMA is a superior imaging modality in prostate cancer because it demonstrates the presence of active tumor tissue in PET / CT and allows the possibility of detecting unexpected areas of involvement with whole body imaging. In addition, intensive PSMA expression in cells in the involvement areas helps evaluate the alternative treatment option with the Lu-177-labeled PSMA molecule in addition to the newer treatments such as abiraterone / prednisolone, enzalutamide, cabazitaxel and Ra-223 in patients who do not respond to Docetaxel.

Keywords: Docetaxel, Ga-68 PSMA PET / CT, Prostate,