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Titel des Beitrags:
Fluorine-18-Fluorodeoxyglucose Positron Emission Tomography Is Useless for the Detection of Local Recurrence after Radical Prostatectomy

Abstract:
Objective: After radical retropubic prostatectomy a rise of the prostate-specific antigen (PSA) indicates a local recurrent or metastatic disease. If the bone scan shows no apparent bone metastasis, morphological imaging methods like x-ray computed tomography, magnetic resonance imaging or transrectal ultrasound often cannot distinguish between postoperative scar and local recurrence. Therefore we investigated the feasibility of fluorine-18-fluorodeoxyglucose positron emission tomography (F-18 FDG PET) for metabolic characterization of prostatic cancer, especially for differentiation of scar or recurrent prostate cancer after radical prostatectomy.

Methods: Dynamic PET with 370 MBq F-18 deoxyglucose (F-18 FDG) up to 60 min p.i. was performed in 2 patients with biopsy-proven benign prostatic hyperplasia, in 11 patients with a histologically proven prostate cancer prior to radical retropubic prostatectomy (RRP) and 7 patients with suspected local recurrence (with negative bone scan) after RRP prior to biopsy of anastomosis (3 local recurrence, 4 postoperative scar).

Results: Prostate cancer showed a very low F-18 FDG uptake. The placement of regions of interest was only possible by the use of other imaging methods. There was not difference between the F-18 FDG uptake of benign prostate hyperplasia, prostate carcinoma, postoperative scar or local recurrence.
after radical prostatectomy. Conclusion: F-18 FDG seems not to be useful to distinguish between postoperative scar and local recurrence after radical prostatectomy.

Stichworte: Prostate cancer; Fluorine-18-fluorodeoxyglucose; Positron emission tomography

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