Assessment of Ga-68 prostate specific membrane antigen progress using PET/CT in patients with prostate cancer
Habibollah Dadgar
Imam Reza International University, Iran

Prostate cancer is one of the most malignancies affecting men. Recurrence of prostate cancer is usually assessed by elevating serum Prostate-Specific Antigen (PSA) level. These days, new radiotracers using Positron Emission Tomography (PET) have demonstrated new insights recurrence of disease. Meanwhile, emerging Ga-68 Prostate Specific Membrane Antigen (PSMA) provides opportunities to localize prostate cancer in low level of PSA and recurrence. In the current report we presented intense uptake in Ga-68 PSMA, (PET)/Computed Tomography (CT) in early and late monitoring of 74 years old male patient with prostate carcinoma diagnoses. An automated synthesis module (Scintomics GRP, Fürstenfeldbruck, Germany) and 68-Ge/68-Ga generator (Pars Isotope, Tehran, Iran) used for radio-pharmaceutical production was purchased. Disposable cassette kits and chemicals including the precursor DKFZ-PSMA-11 were obtained from ABX advanced biochemical compounds. A HPLC system was used to determine the radiochemical purity. Radionuclidic purity of the final product solution and separation cartridges was analyzed using gamma spectrometry. Fast radio-labeling of HBED-CC represents which this radiopharmaceutical is a stable at room temperature. Stability procedures controlled with distinct temperature conditions during the radio-labeling reaction and directed predominantly to the formation of the thermodynamically more stable one. 68Ga-PSMA-HBED-CC (68Ga-PSMA-11) radio-synthesis implemented using a cassette-based procedure. Clinical 68Ga-PSMA-HBED-CC PET/CT scanning resulted in high quality images in patients. 68Ga-PSMA-11 is a promising radiotracer in which has better sensitivity and specificity for even low level of prostate cancer lesions versus the conventional imaging.

reza.lt.dadgar@gmail.com