

Evaluation of the Radiolabelled 68GA-DOTATOC Complex in Adenocarcinoma Breast Cancer

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Abstract : Nowadays, 68Ga-DOTATOC has been known as a potential agent for the detection of neuroendocrine tumours and it has indicated higher sensitivity compared with the 111In-Octreotide. The aim of this study was to evaluate the effectiveness of this new agent in the diagnosis of adenocarcinoma breast cancer. 68Ga-DOTATOC was prepared with the radiochemical purity of higher than 98% and by the specific activity of 39.6 TBq/mmol. 37 MBq of the complex was injected intravenously into the BULB/c mice with adenocarcinoma breast cancer. PET/CT images were acquired after 30, 60 and 90 min post injection demonstrated significant accumulation in the tumour sites. Also, considerable activity was observed in the kidney and bladder as the main routes of excretion. Generally, the results showed that 68Ga-DOTATOC can be considered as a suitable complex for diagnosis of the adenocarcinoma breast cancer using PET procedure.

Keywords : adenocarcinoma breast cancer, 68Ga, octreotide, imaging

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