Increasing of FDG uptake into T cell and B cell activated by polyclonal mitogens

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Abstract

Many cases have been reported in which FDG is taken up not only by malignant tumors but also by benign tumors and inflammatory lesions, reducing the specificity of FDG PET. These reports showed that FDG was taken up by macrophages and granulocytes, lymphocyte. The aim of this study was to investigate if FDG could be incorporated into T cell and B cell activated by polyclonal mitogens. FDG uptakes by inactivated T cell and B cell were very little. However, its uptake to T cell and B cell activated by Con A and LPS were about 128 times and 80 times, respectively. These uptakes were similar to incorporation into human tumor cell line HeLa S3. The results of the present study revealed that SUV obtained by FDG PET is greatly influenced by FDG uptake to activated lymphocytes and cancer cells.