

Trial Application of 3DSRT to PET Study

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Abstract

3DSRT is an analysis software developed for SPECT. We trially used the software to see if its automatic ROI setting, which is very convenient and timesaving, is applicable to our PET study. After standardizing PET image of CBF using SPM 99, a software for anatomical imaging standardization, the data was input to 3DSRT for automatic ROI setting. The 3DSRT 's ROI data was compared with the ROI data obtained by manual calculation. Correlation coefficient of the both ROI data was 0.75, showing relatively good agreement, though the ROI data of 3DSRT showed a tendency of lowering around the parietal lobe. The deviation is supposedly caused by that the imaging data of the parietal lobe was not sufficiently provided to the 3DSRT because the depth of vision of PET camera in the Z direction is rather limited. The template of SPM is set based on CBF, but we used it for getting ROI data of other functional imaging such as OEF, CMRO₂, CBV, NMSP, and had fairly correlative results except for OEF, suggesting a possibility of clinical application of the 3DSRT to our PET study.