Abstract

Background: Although a number of studies in patients with a variety of malignant tumors have shown that metabolic activity on fluorine-18 deoxyglucose positron emission tomography computed tomography (18 F-FDG-PET/CT) is correlated with survival, there are few studies about the impact of 18 F-FDG-PET/CT for survival in small cell lung cancer (SCLC) patients. There is still some ambiguity as to whether FDG PET in patients with SCLC will ensure prognostic knowledge for survival. We performed a retrospective analysis of prognostic implication of 18 F-FDG-PET/CT in patients with SCLC. Methods: We retrospectively reviewed 54 patients with histologically or cytologically proven SCLC who had undergone pre-treatment 18 F-FDG-PET/CT scanning between September 2007 and November 2011 in the Dicle University, School of Medicine, Department of Medical Oncology. SUVmax and other potential prognostic variables were chosen for analysis in this study. Univariate and multivariate analyses were conducted to identify prognostic factors associated with survival. Result: Among the eleven variables of univariate analysis, three variables were identified as having prognostic significance: Performance status (p < 0.001), stage (p = 0.02) and diabetes mellitus (p = 0.05). Multivariate analysis showed that performance status and stage were considered independent prognostic factors for survival (p < 0.001 and p = 0.002 respectively). Conclusion: In conclusion, performance status and stage were identified as important prognostic factors, while 18 F-FDG-PET/CT uptake of the primary lesions was not associated with prognostic importance for survival in patients with SCLC.

Keywords

Small cell lung cancer, Prognostic factors, 18 F-FDG-PET/CT.