

Evaluation of the liposarcoma by FDG-PET

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Introduction

Integrated 2-deoxy-2-F18-fluoro-D-glucose positron emission tomography combined with computed tomography (FDG-PET/CT) has increasingly been used for the management of patients with various types of cancer. However, it is denied about the usefulness of the benign and malignant in soft tissue-tumors. In this background, it is thought that soft-tissue sarcomas have various histological types and malignancies. Liposarcoma is one of the most frequent soft-tissue sarcoma. The aim of the current study is to evaluate the usefulness of FDG-PET when limited to liposarcomas.

Material and Method

From our database comprising of 255 bone and soft tissue tumors, which were obtained from patients who were examined by integrated FDG-PET imaging during the period from December 2004 to December 2013, 56 patients with liposarcoma were biopsied or surgically treated, pathologically recognized. We examined the differentiation of the tumor having a maximum standardized uptake value (SUVmax) by tumor size, AJCC stage, and histological type.

Result

The study included 23 pleomorphic liposarcomas, 22 myxoid liposarcomas, 4 dedifferentiated liposarcomas, and 10 well-differentiated liposarcomas. The mean size of pleomorphic, myxoid, dedifferentiated, and well-differentiated liposarcomas were 9.25cm, 9.33 cm, 9.95cm and 11.65cm, respectively. No statistically significant differences were observed when comparing these histological types. The mean SUVmax of these histological types were 6.26, 2.93, 3.21, and 0.97, respectively. There was a statistically significant difference identified in the SUVmax between pleomorphic liposarcomas and other histological types.

Conclusion

The SUVmax on FDG-PET is valuable parameter for distinguishing the histological type of liposarcoma.