

The Role of PET-CT for the detection of recurrence of gastric cancer in compared with contrast CT

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Background : The purpose of this study is to assess the utility of fusion Positron Emission Tomography/Computed Tomography(PET-CT) and the benefit of additional PET-CT on contrast CT for the detection and confirmation of recurred gastric cancer in compared with contrast CT alone
Material and Methods : 52 patients who had received curative resection and had undergone fusion PET-CT and contrast CT for surveillance of recurrence from Jan, 2004 to Dec, 2006 in Seoul National University Hospital were analyzed retrospectively. Validation of recurrence was by means of repeated contrast CT follow up at least 5months time interval (n= 35) or histologic confirmation (n=17). **Result :** Disease recurrence was established in 38 patients. Overall sensitivity was 68.4% (26/38) in PET-CT and 89.4%(34/38) in contrast CT (p=0.057). The specificity was 71.4% (10/14) and 68.4% (26/38) in respectively(p=1.0) By the site of recurrence, sensitivity and specificity of PET-CT were 70.0%(14/20) and 96.8%(31/32) in LN, 100%(7/7) and 93.3%(42/45) in remnant stomach/anastomosis site, 46.6%(8/15) and 97.2%(41/42) in peritoneal seeding, and 66.6%(4/6) and 97.8%(45/46) in liver, whereas the corresponding CT values were 90%(18/20) and 87.5%(28/32) in LN, 42.8%(4/7) and 95.5%(43/45) in remnant stomach/anastomosis site, 86.6%(13/15) and 86.4%(31/36) in peritoneum, and 50.0%(3/6) and 100%(46/46) in liver. There was no significant difference of sensitivity and specificity between the two image studies, but in peritoneum, Contrast CT was more sensitive than PET-CT (p=0.035). When a lesion on CT was suspicious for recurrence but not definite, additional PET-CT showed no benefit to confirm recurrence in all the sites (p>0.3). But in clinic, the change of further treatment decision by findings from PET-CT was in 11 of 17 cases when the findings in two methods did not agree. **Conclusion:** PET-CT was as powerful as contrast CT in the detection of recurrence of gastric cancer except peritonem. But additional PET/CT on contrast CT did not give more information to us for the confirmation of recurrence in compared with contrast CT alone. Further study on the validation of the role of PET-CT in the surveillance of gastric cancer recurrence is warranted.

Primary adenocarcinoma of small intestine: clinical characteristics and natural history.

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Background : Malignant small intestine tumor account for 0.1-0.3% of all malignancies and annual incidence in Korea was 449 cases (Annual Report of the Korea Central Cancer Registry 2002). Although primary adenocarcinoma is the most common histologic subtype and 39% of all small intestine malignancies (Coit DG. Cancer: Principles and Practice of Oncology. 6th ed. Philadelphia, Pa: Lippincott Williams & Willkins, 2001:1204-1215), there is no report about its clinical characteristics and natural history. A retrospective analysis was conducted of patients with small intestine adenocarcinoma to explore the clinical characteristics and prognosis. Patients and **Methods :** All patients with adenocarcinoma of small intestine treated with Kangnam and Uijeongbu St. Mary's hospitals of Catholic University of Korea between March 1998 and March 2007 were identified through the cancer registry. The medical records were reviewed for patient characteristics, treatment and outcome data. Survival statistics were estimated using the Kaplan Meier survival and Cox proportional regression model. **Results :** Data on 32 patients was reviewed. 13 patients (40.6%) underwent curative resection and 6 patients received adjuvant chemotherapy. 9 patients received palliative chemotherapy. Median of overall survival of all patients was 12 months (95% CI: 6.5-17.5). Five-year survival and relapse free survival rates after curative resection was 66 % and 32.8 %, respectively. All of the cases of relapse were systemic relapse. Median survival and progression free survival of patients received palliative chemotherapy was 6.0 months (95% CI: 3.3-8.6) and 4months (95% CI: 1.1-6.9), respectively. **Conclusion :** The prognosis of Primary adenocarcinoma of small intestine was poor especially in case curative resection not to be performed. Further study on the methods for early detection and effective systemic chemotherapy should be investigated.