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Invited Intersting Image

# 쌍발 위 점막 유관성 유 림프조직 림프종의 $^{18}$F-FDG PET/CT 및 내시경 소견의 상관분석: 1예 보고

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# Correlation of $^{18}$F-FDG PET/CT and Endoscopic Findings of Twin Mucosa-Associated Lymphoid Tissue (MALT) Lymphoma of the Stomach: Report of a Case

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Mucosa-associated lymphoid tissue (MALT) type lymphoma arises from extranodal marginal zone B-cell. It is etiologically associated with *Helicobacter* pylori infection and, hence, can be cured by antibiotic treatment. MALT type lymphoma is the most common variety of gastric lymphoma that is rare in the stomach[1)]. The published data of clinical studies on the usefulness of $^{18}$F-FDG PET in the diagnosis of MALT type lymphoma varied according to authors. Thus, the result of Hoffmann et al.[2)] was discouraging whereas a high diagnostic accuracy was reported by Ambrosini et al.[3)] The latter group further went to suggest that higher $^{18}$F-FDG uptake in gastric MALT type lymphoma would positively relate to the aggressiveness of neoplasm. The clinical studies conducted by other groups on MALT lymphomas of the stomach, lung, orbit and parotid gland[4)] and the stomach, lung, parotid gland, skin, orbit, mandible, esophagus and uterus[5)] confirmed that $^{18}$F-FDG scan is valuable.

Recently, we had an occasion to observe PET/CT findings in a case of biopsy proven double-focus MALT type lymphoma of the stomach that affected the greater curvature of the body portion. Gastrofiberscopy was performed four days before PET/CT scan enabling us to make a correlative study of *in vivo* macroscopic findings of mucosal change as demonstrated in each examination.

The patient was a 59-year-old male with a two-year history of infrequent, intermittent "dark stool" passages. The endoscopic studies performed in local clinics suggested upper gastrointestinal tract pathology with *H. pylori* infection and gastroscopy done in our hospital after the last dark-stool passage in January 2007 revealed chronic atrophic gastritis but no lymphoma. Spiral CT then performed was unremarkable. It was obvious that MALT type lymphoma in our case was yet not present or unrecognizable in January 2007. In the long run, however, the patient was hospitalized on October 12, 2007 since this time black-stool passage was repetitive over a period of a few successive days and the new episodes were accompanied by abdominal pain.

Physical examination was unremarkable. The blood pressures were 120/80 mmHg and body temperature, pulse and respiration rate were 36.7°, 86/min and 20/min, respectively. Complete peripheral blood counts were negative and so were the other laboratory examinations including CA19-9 and CEA assays. However, follow-up CT examination disclosed the changes that were suggestive gastric lymphoma involving the body of the stomach and the PET/CT for tumor staging showed two separate lesions with mucosal aberration and minimally increased $^{18}$F-FDG uptake.

To detail the larger lesion involved the lower greater

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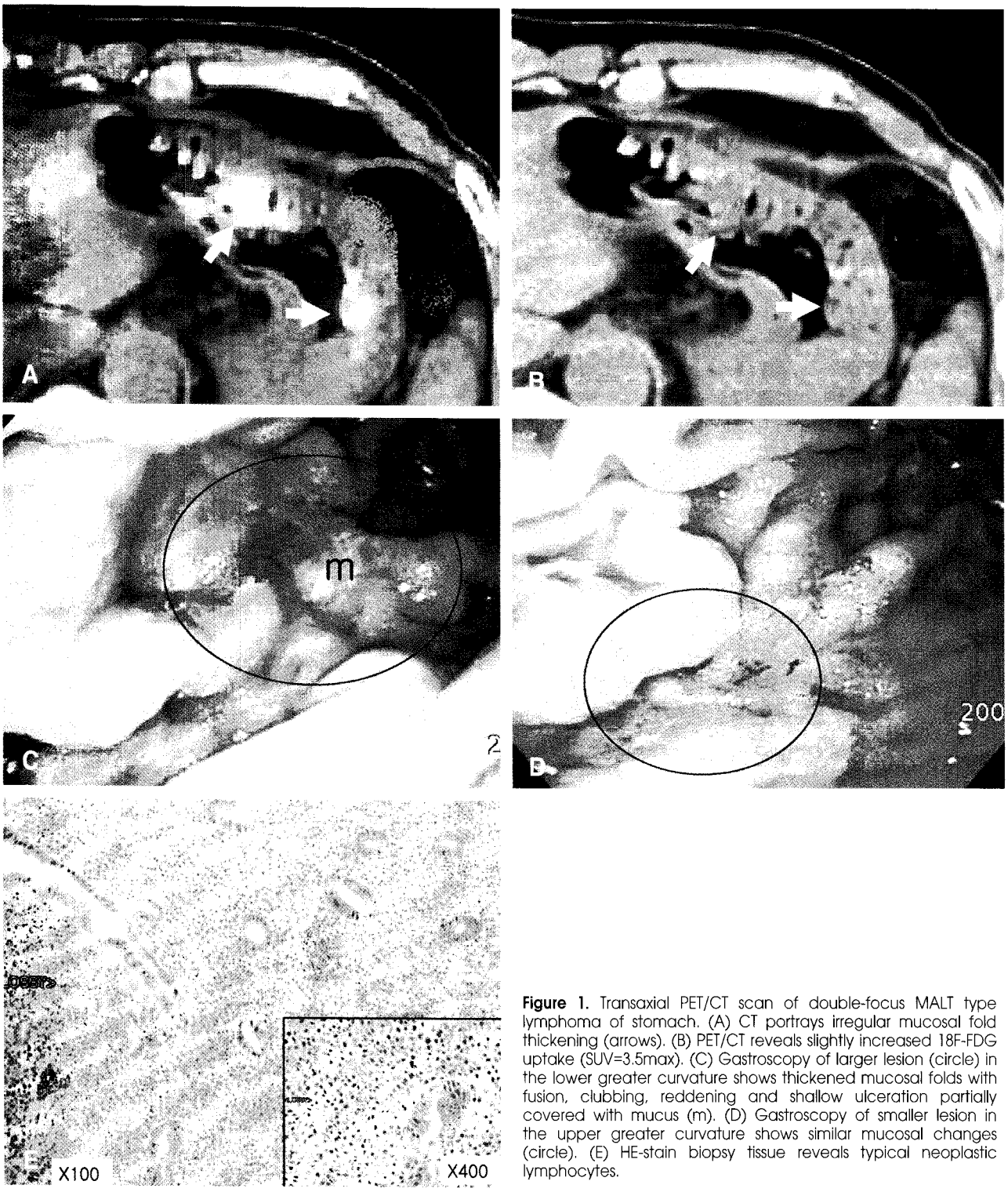


**Figure 1.** Transaxial PET/CT scan of double-focus MALT type lymphoma of stomach. (A) CT portrays irregular mucosal fold thickening (arrows). (B) PET/CT reveals slightly increased 18F-FDG uptake (SUV=3.5max). (C) Gastroscopy of larger lesion (circle) in the lower greater curvature shows thickened mucosal folds with fusion, clubbing, reddening and shallow ulceration partially covered with mucus (m). (D) Gastroscopy of smaller lesion in the upper greater curvature shows similar mucosal changes (circle). (E) HE-stain biopsy tissue reveals typical neoplastic lymphocytes.

curvature and the smaller one the upper greater curvature (Fig. 1A). The initial and 1-h delayed FDG uptake values in the larger and smaller lesions were calculated as 3.4mx and 3.5max and 3.3max and 3.2max, respectively (Fig. 1B). Gastroscopy found irregular mucosal fold thickening, fusion, clubbing, reddening and shallow ulceration covered with mucus in the lower portion (Fig. 1C) and upper potion of the greater curvature (Fig. 1D). Endoscopic

biopsy specimens were sampled from tumor margins and HE stain established diagnosis of MALT type lymphoma (Fig. 1E). The patient was treated by *H. pylori* eradication.

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