

Usefulness of 3D Multidetector Row CT (Virtual Gastroscopy) in Evaluation of Gastric Cancer: A Comparison with Conventional Endoscopy, Endoscopic Ultrasonography and Histopathology

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Background: The aim of this study is to assess the role of virtual gastroscopy in the detection and precise location of gastric cancer as compared to conventional endoscopy. Also, the accuracy of the multidetector row CT in preoperative staging of gastric cancer was determined as compared to EUS and histopathology findings. **Material and Methods:** Between January 2003 to August 2003, 63 (31 early and 32 advanced) patients of gastric cancer were evaluated with EGD and biopsy, EUS and 3D MDCT. A radiologist who was blinded to the endoscopic findings analyzed CT findings and images were reprocessed as virtual gastroscopy. Among 63 patients, 48 were confirmed by surgery or EMR. The remaining cases were confirmed by their typical findings on EGD and biopsy. Diagnostic accuracy of CT for accurate detection, location and staging of gastric cancer was determined and compared with endoscopy, EUS and histopathology. **Results:** 63 patients of gastric cancer had 67 lesions. The overall accuracy of virtual gastroscopy for detection of gastric lesions was 94 % (63/67) with accuracy of 96.7 % (30/31) and 100 % (32/32) for detection of early and advanced gastric cancer respectively. Virtual gastroscopy failed to detect two small polyps (size 5mm) and two tubular adenomas (size 10mm) in patients with early gastric cancer. 36 (57 %) patients underwent surgery and 12 (19 %) patients underwent EMR as their definitive treatment. The overall accuracy, sensitivity and specificity of EUS and CT in preoperative determination of T stage were 85.4 %, 81.6 %, 95.2 % and 83.3 %, 69.1 % and 94.4 % respectively. The accuracy, sensitivity and specificity of EUS and CT for lymph node staging was 79.1 %, 57 %, 89.5 % and 75 %, 57.4 % and 89.3 % respectively. **Conclusions:** 3D multidetector CT along with virtual gastroscopy is a useful diagnostic modality for the accurate detection and staging of gastric cancer. However, further case-controlled studies with large series of patients are required to validate its role for noninvasive evaluation of gastric lesions.

Effects of EGF Receptor Antagonist (AG1478) on *Helicobacter pylori* Infected AGS Cells

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Background : The rho-GTPases are required for actin cytoskeletal reorganization and cell division. Rho plays a role in the organization of stress fibers and focal adhesion. Rac1 and Cdc42 induce lamellipodia and filopodia formation respectively. Also Rho GTPases regulate gene transcription and cell proliferation and they are required for transforming activity of Ras and other oncoproteins. Our previous study showed that *H. pylori* infection resulted in the changes of rho-GTPases involved in various cellular processes related to the cytoskeleton. It is not clear however, whether pathways involving EGF receptor is involved in the activation of Rho GTPases when infected by *H. pylori*. **Materials and Methods :** The investigators observed the effect of EGF receptor blockade with AG1478 on the *H. pylori*-induced cytoskeletal rearrangement in *H. pylori* infected AGS cells. Actin and focal adhesion were visualized with antibodies against β -actin and phosphotyrosine. **Results :** EGF increased labeling of focal adhesion, which was blocked by AG1478. *H. pylori* infection also increased focal adhesion and induced cytoskeletal rearrangements, which responses were decreased by the pretreatment with AG1478. **Conclusion :** These results suggest that some actions of *H. pylori* on infected host cells may be mediated through EGF receptor pathways, acting on the downstream from EGF receptor.