

**Sa1664****Clinical Implication of p53, c-erbB-2 and EGFR in Early Gastric Cancer Treated by Endoscopic Submucosal Dissection**

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Backgrounds; The aim of this study is to evaluate clinical implication of p53, c-erbB-2 and EGFR in early gastric cancer treated by endoscopic submucosal dissection Patients and Methods; From Mar 2003 to Jul 2010, 487 patients who treated endoscopic submucosal dissection for early gastric cancer with evaluation of immunohistochemical markers were enrolled. Statistical analysis between immunohistochemical markers and anatomic-clinical status was performed; location, size, differentiation and mucin phenotype of cancer, involvement of resection margin, depth of invasion and lymphovascular invasion. Results; Male were 348 and female were 139. Average age was 63. 407 cases were differentiated and 80 cases were undifferentiated. Mucosal cancer were 396 cases and submucosal cancer were 91 cases. Average follow up periods were 818 days(41~1924) and there was no recurrence of early gastric cancer and cancer-related death. The positivity of markers as follows; p53 42.3%(206/487), c-erbB-2 18.3%(49/268) and EGFR 47%(125/266). The only c-erbB-2 showed statistical correlation with mucin phenotype of early gastric cancer. Positive group of c-erbB-2 showed less gastric type(14.2% vs 32.4%) and more intestinal type(46.9% vs 29.6%) proportion than negative group(p value = 0.017). Conclusions; Among p53, c-erbB-2 and EGFR, only c-erbB-2 showed correlation with mucin phenotype of early gastric cancer. Long term follow up periods are needed.

**Sa1665****Changes in Reactive Lymph Nodes Status of Early Gastric Cancer After Endoscopic Submucosal Dissection**

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Background: Endoscopic submucosal dissection for early gastric cancer was increased. The aim of this study was to evaluate the natural courses of reactive lymph nodes after ESD. Patients and Methods; From Mar 2003 to Jul 2010, 79 patients who showed reactive lymph nodes on CT scan were enrolled. Evaluation of lymph node status was evaluated by serial CT scan after ESD was performed. Results; Of 79 patients, male was 53 and female was 26. Average age was 59. Differentiated cancer were 68 and undifferentiated cancer were 11. Mucosal cancer were 65 and submucosal cancer were 14, respectively. 16 patients had gastrectomies after ESD results were beyond the indications of endoscopic resection, but there were no lymph node metastasis. The rest 45 patients who underwent ESD had follow up CT scan for the evaluation of lymph nodes. Average follow up periods were 738 days(64~1845) and 30 patients(47.6%) had disappearance of lymph nodes(average follow up periods; 445 days(90-1523)), 4 patients(6.4%) had significantly decreased size of lymph nodes(average follow up periods; 760 days(433-1036)). Although 29 patients(46%) had no interval changes of lymph nodes, there were no increased size of lymph nodes. Conclusions; Reactive lymph nodes of EGC indicated for ESD is relatively safe. Long term follow up periods are needed.

**Sa1666****How to Manage Prepyloric Tumors Involving the Pyloric Channel That Are Technically Difficult to Resect Completely With Endoscopic Submucosal Dissection: Comparison of the Retroflexion Versus Conventional Forward View Technique**

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Background and study aims: It is difficult to perform complete resection of prepyloric tumors, especially those involving the pyloric channel due to incomplete visualization and insufficient resection margin with forward endoscopic view. This study aimed to investigate outcomes of endoscopic

submucosal dissection (ESD) for prepyloric tumors involving pyloric channels to assess the effectiveness of the retroflexion view technique in comparison with forward view technique. Patients and methods: Between January 2006 and January 2010, 47 prepyloric tumors were treated by ESD at Severance and Kangnam Severance Hospitals, Seoul, Korea. We retrospectively investigated clinicopathological features and compared treatment results (en bloc resection rate, curative resection rate, complete resection rate, and complications) of conventional forward view technique with those of retroflexion view technique. Results: Of the 47 prepyloric tumors, 23 lesions had pyloric channel involvement (group 1) and 24 lesions did not (group 2). The en bloc resection, curative resection (en bloc resection or piecemeal resection in the completely reconstructed specimen with tumor-free basal and lateral margins) and complete resection (en bloc resection with a tumor-free margin) rates for all ESD cases were 80.9, 85.1 and 70.2%, respectively. The en bloc resection, curative resection and complete resection rates were significantly lower in group 1 than group 2. Of the tumors involving the pyloric channel except 3 cases which were extended to duodenum, 12 lesions were resected with the retroflexion technique and 8 lesions with the conventional forward technique. The curative resection rate was significantly higher in the retroflexion group than the conventional forward group (91.7% vs. 37.5%, respectively; p=0.018). The complete resection rate was also higher in the retroflexion group than the forward group; however, this difference was not statistically significant. There were no significant differences in the en bloc resection rate, procedure time or invasion depth after ESD between the two groups. Bleeding during resection was common, but was managed with hemostatic forceps and hemoclips in all cases. None of the patients experienced perforation or pyloric stenosis after ESD in the retroflexion group and the forward group. Conclusions: ESD using a retroflexion maneuver is a more feasible and effective method for the curative resection of gastric tumors involving the pyloric channel.

**Sa1667****Biochemical Analysis for Cytoprotective Actions of Polaprezinc Against Ethanol-Induced Gastric Mucosal Injury in Animal Model**

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Background: Polaprezinc (PZ) is a compound composed of L-carnosine and zinc, which binds to gastric mucosa and maintains its homeostasis via non-prostaglandin-dependent mucosal protective anti-oxidant properties. However, there are currently no systematic studies that investigate its properties of cellular damage and repair. This study investigates the novel effects of PZ on the expression of inflammatory cytokines, anti-oxidant, DNA repair enzymes and heat shock proteins (HSP) in ethanol-induced gastric ulcers in rat model. Methods: 8 week-old 56 Sprague-Dawley rats were randomly divided into test and control groups according to PZ administration dosage (5, 10, 30 mg/kg), and were subjected to oral administration of 2ml of 100% ethanol to induce gastric mucosal damage. Rats were sacrificed 1 hour later and the stomach was removed. And we obtained pathologic ulcer indexes. After that tissue samples were ground with tissue buffer and lysed by sonication and centrifuged. Western blot analysis was used to evaluate factors such as cytokines, growth factors, DNA repair enzyme, heat shock proteins (HSP) between PZ group and control group. Results: Pathological ulcer indexes in the PZ group were significantly lower as compared to the control group. Inflammatory cytokine (IL-6, IL-8, TNF- $\alpha$ ) levels were also decreased after polaprezinc administration, whereas growth factors (PDGF-B, VEGF, NGF) in PZ group were significantly increased. Furthermore, the expression of DNA repair enzymes Ref-1 and PCNA was significantly increased in the PZ group, and HSP 70, 60, 27, 10 showed significantly elevated levels in accordance with PZ dosage levels. Conclusion: In the animal model, polaprezinc administration improved the ethanol-induced mucosal injury, and showed anti-inflammatory properties and mucosal protective effects via inflammatory cytokine reduction and growth factors expression increases, respectively. Furthermore, PZ revealed cytoprotective effects through the increasing HSP.