

Title: Study of the effect of neoadjuvant chemotherapy on increasing resectability in patients with locally-advanced gastric cancer

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Introduction: Surgical resection is the only curative treatment for gastric cancer. However, the overall prognosis of gastric adenocarcinoma is poor and advanced disease may even make surgical treatment impossible. It has been theoretically proposed that administration of chemotherapy before surgical resection may down-stage the disease facilitate resectability especially in locally-advanced tumors.

Aim: We wanted to assess the effect of administration of neoadjuvant chemotherapy on tumor resectability in patients with locally-advanced gastric adenocarcinoma.

Materials and methods: During a randomized-controlled trial, we divided 60 patients with locally-advanced gastric adenocarcinoma into two groups of neoadjuvant chemotherapy and surgery (case) versus surgery alone (control). Because of patient dropouts, we analyzed the results for 22 and 29 patients in case and control groups respectively. The study period was March 20, 2011 to March 20, 2014. A non-randomized set of 23 patients were also added to the control group (Multi-center analysis). The analysis was repeated for non-randomized patients (22 case patients versus 52 control patients).

Results: The mean age of patients in case and control groups was 58.3 ± 9.1 and 59.7 ± 8.7 years of age respectively ($p > 0.05$). Male to female ratio was 15/7 and 41/11 in case and control groups respectively ($p > 0.05$). In Randomized patients, 19 patients (86.4%) were resectable in case group; while 16 patients (55.2%) were resectable in control group ($p < 0.05$). Multicenter analysis also revealed resectability in 19 patients (86.4%) and 31 patients (59.6%) of case and control groups respectively ($p < 0.05$).

Conclusion: We conclude that neoadjuvant chemotherapy could increase tumor resectability rate in patients with gastric adenocarcinoma. However, further studies are necessary to confirm the effect of this modality on patients' overall survival.

Key Words: adenocarcinoma; stomach; chemotherapy; locally-advanced