Ref.: NO: 45535

Title: Relationship between celiac artery variation and number of lymph nodes dissection in gastric cancer surgery

First of all, thank you very much for the criticisms and relevant suggestions.

Reviewer #1:

• "single factor analysis" – should be "univariate"

——we have changed "single factor analysis" to "univariate" in abstract.

• "independent risk factor ." – should be "prognostic factor"

——we have changed "independent risk factor" to "prognostic factor" in our abstract.

• "Therefore, lymph nodes around the abnormal artery may not need …" – should be "Therefore, lymph nodes around the abnormal hepatic artery may not need …"

——we have changed "Therefore, lymph nodes around the abnormal artery may not need …" to "Therefore, lymph nodes around the abnormal hepatic artery may not need to be dissected in radical D2lymphadenectomy." in abstract.

Core tip: • "cleaning" – it would be better "lymph node dissection"

——we have changed "cleaning" to "lymph node dissection" in Core tip

Introduction: • In the results of this article, the authors report a fairly high percentage of abnormal anatomy of celiac artery – 26,1% . Thus, it is necessary to refer a literature reference on such anatomical variability in introduction.

——we have added relative contents in introduction: "What's more, the celiac artery variation rate reaches to 30.9% according to Arifuzzaman M's report, so…"

General information: • There is no information about adjuvant chemotherapy. If patients received it, is there statistical difference in the number of such patients in both groups (with normal and abnormal anatomy)?

——we have added relative contents in table 1. Our results show that there is no statistical difference in the number of such patients in normal group and abnormal anatomy group.

• A fundamental question to the authors: Why 49 cases stage IA received D2 lymphadenectomy while Japanese Gastric Cancer Association recommends endoscopic resection or D1 level of lymphadenectomy for such a patients?

—— In our study, preoperative comprehensive evaluations of all patients indicated D2 lymphadenectomy, some patients of stage IA were finally confirmed by postoperative pathologic examination after surgery.

Results: • Page 10: "The sex, age, tumor location and pathological type of the patients had …." should be rephrased.

——we have changed "The sex, age, tumor location and pathological type of the patients had …." to "and was not affected by sex, age, tumor location and pathological type (all $p > 0.05$)."

• Page 14: "The results showed the tumor staging, tumor location, Borrmann typing, number of lymph nodes dissection, number of lymph node metastases, and positive lymph nodes ratio were the prognostic factors of gastric cancer( See Table 3) ..." Intraoperative bleeding is missed.

——we are very sorry, we make a mistake. we have added those two missed contents (operation time, intraoperative bleeding amount ) in the article.

Discussion: • "Based on randomized controlled clinical studies, D2 lymphadenectomy is recommended as a standard gastric cancer operation worldwide." [references?]

——we have rephrased to "At present, D2 lymphadenectomy has been widely accepted as a standard of surgery for advanced gastric cancer around the world."

• Basis on the results – tumor stage significantly related with number of retrived lymph nodes. Why? Needs to discuss in Discussion.

——we have added relative discussion in the second paragraph in Discussion part.

Reviewer #2:

the survival curves present overall survival. In order to definitively conclude that the lesser number of nodes retrieved in patients with aberrant celiac artery has no impact on postoperative disease course it would be more accurate to give the disease-free survival curves (if this data exists).

——We agree with your suggestion, but we didn't collect relevant data due to the defect of design at that time.

It was not mentioned whether some of the patients were given adjuvant chemotherapy. This factor should be included in the survival analysis.

——we have added relative contents in table 1. Our results show that there is no statistical difference in the number of such patients in normal group and abnormal anatomy group.

A grammatical mistake - The word "precious" is a mistake and should be replaced by the word "previous" (line 12 in introduction section))

——we have changed "precious." to "previous"

Reviewer #3:

Comments Major point1. The authors described that the number of lymph nodes dissection in patients with celiac artery variation was reduced, but there was no obvious effect on the prognosis. Therefore, lymph nodes around the abnormal artery might not need to be dissected in radical D2 lymphadenectomy. However, the numbers of lymph node in patients with celiac artery variation might be less than in the patients without variation from the first. The authors need to evaluate the prognostic effect of the numbers of lymph node dissection in only celiac artery variation group.

——Thank you for your important suggestion. This study didn't evaluate the prognostic effect of the numbers of lymph node dissection in celiac artery variation patients because of limiting of less number sample. We will take analysis following by the increasing of cases in the future.

Minor points1. (MATERIALS AND METHODS)The paragraph of General information should be written by double space.

— We write this paragraph by 1.5 space accordance with the other paragraph.

2. (MATERIALS AND METHODS) What does MSCTA stand for? The author should spell out at the first appearance.

——MSCTA stands for multi-slice spiral CT angiography, we have spelled out at the first appearance.

3. (MATERIALS AND METHODS)If there were the difference between CT image and operation findings, how were the results treated? The authors should mention the discrepancy rate between these findings.

——we have added relative items in the part of "The variation of celiac artery" in the result. Celiac artery types in all 421 cases detected by preoperative MSCTA were conformed intraoperatively.

4. (RESULTS)The incidence of abnormal hepatic artery derived from superior mesenteric artery seems to be too high. Is it same as previous reports? The authors should refer from the previous reports.

——we have added relative items in the second paragraph in Discussion. The incidence of abnormal hepatic artery derived from superior mesenteric artery was light higher than our previous report(37.0%).

5. (RESULTS)There are many kinds of variation in this study. However, some of them seems not to affect lymph node dissection. The authors should evaluate only patients with abnormal hepatic artery derived from superior mesenteric artery.

——Thank you for your advices. This study mainly evaluated the relationship between the celiac artery variation and the number of lymph nodes dissection in gastric cancer surgery on the whole. Next step we will evaluate the relationship between the celiac artery variation and the number of lymph nodes dissection in different celiac artery variation type separately following by the increasing of cases in the future.

6. (Table 2)What do $\bar{x}\pm s$, SS and MS stand for? The author should spell out at the first appearance.

——$\bar{x}\pm s$ stand for mean ±standard deviation, we think this is International standard symbol, don't need spell out.  And SS stands for SS- Stdev square and MS stands for

Mean square, we have added notes under the table 2.

7. (Table 3)How did the authors divide these Clinicopathological features into two group? The authors should show the criteria for each features in the table.

——The table 3 just shows the result of univariate Cox regression analysis in gastric cancer, about How to divide these Clinicopathological features into two groups have been shown in table 2.

8. (DISCUSSION)The authors described that patients with abnormal hepatic arteries derived from the superior mesenteric artery might increase the risk of intraoperative bleeding, postoperative liver function damage and pancreatic fistula. In fact, did the risk of complication after operation increase? The authors should show the complication rate for each group.

——Thank you for your advice. We have added relative item (complication ) in table 1.

Finally, thanks again for your time.