

## **Responses to Reviewers**

We wish to submit our revised manuscript entitled “Successful endovascular treatment of endoscopically unmanageable hemorrhage from a duodenal ulcer fed by a renal artery: A case report and review of the literature” to be considered for publication as a Case Report in the *World Journal of Clinical Cases*.

We have carefully revised our manuscript in response to the reviewers’ comments. Our point-by-point responses to the reviewers’ comments are included below. We wish to thank the reviewers and the editor for the valuable comments that have improved our manuscript.

The contents of this manuscript have not been submitted to any other journal. The grammar and syntax of the manuscript have been checked by a native-English-speaking medical editor.

We wish to thank you in advance for considering our manuscript.

Yours sincerely,

**Reviewer #1:** Dear authors I read your interesting paper: congratulations for the successful management of this challenging and interesting case. In an unstable patient many physician usually perform embolization of the feeding vessels of the ulcer even if an extravasation could not be seen, you choose another option that was really successful for your patient. Figures are very beautiful. Really if I had to treat a 52 years old woman with hemodynamic instability due to bleeding duodenal ulcer after failure of endoscopic management I probably would operate her.

I want just to underline some mistakes in the paper:

1. In the title you wrote "literature review" but thereafter in the paper there is just a case report with a discussion and not a really extensive literature review;

**Response:** Thank you for your kind comments. The Guidelines and Requirements for Manuscript Revision of World Journal of Clinical Cases recommends that "case report and review of the literature" should be included in the title.

2. At page number 4 you wrote that surgical therapy is "surgical duodenectomy", but in the acute management of bleeding peptic ulcer the surgical option usually is not a duodenectomy but a duodenotomy with arterial ligation;

**Response:** We wish to thank the reviewer for this comment. We have corrected this error, as follows:

Original text: "If hemostasis is difficult to achieve using this technique, second-line treatments include transcatheter arterial embolization (TAE) and surgical duodenectomy[3]."

Revised text: "If hemostasis is difficult to achieve using this technique, second-line treatments include transcatheter arterial embolization (TAE) and surgery[3]."

**3. At page number 4 you wrote "At our institution, institutional review board approval is not necessary for studies regarding life-threatening emergency cases", I think that it is not necessary in the definitive paper and you can just communicate it to the editor;**

**Response:** We appreciate the reviewer's suggestion. In accordance with this comment, we have deleted this sentence.

**4. You wrote that "according to several reports, there is no difference in the therapeutic results between surgery and TAE, and TAE is preferable because it is less invasive and is associated with a shorter hospital stay", I think that is should be written that the scientific evidence is very low (there are only retrospective series, no prospective studies has been published) and that meta-analysis published recently demonstrated some mortality but a higher rebleeding rate was after TAE comparing with salvage surgery.**

**Response:** We fully agree with the reviewer's comment. Therefore, we have revised the text as follows:

Original text: "According to several reports, there is no difference in the therapeutic results between surgery and TAE, and TAE is preferable because it is less invasive and is associated with a shorter hospital stay[3, 4]."

Revised text: "A meta-analysis revealed that recurrent bleeding was more frequent after TAE than after surgery, but TAE is necessary for inoperable or elderly patients because it is less invasive and results in a shorter hospital stay<sup>[3,4,5]</sup>."

In addition, we have also added the following reference and renumbered the references as appropriate:

"4. Kyaw M, Tse Y, Ang D, Ang TL, Lau J. Embolization versus surgery for peptic ulcer bleeding after failed endoscopic hemostasis: a meta-analysis. *Endosc Int Open* 2014; 2: E6-E14 [PMID: 26134614 DOI: 10.1055/s-0034-1365235]"

**Reviewer #2: The authors reported a case of bleeding from right renal artery successfully treated TAE. Ulcer in the horizontal part was sometimes difficult to diagnose and treat. This manuscript was informative and would be helpful for readers when they encountered gastrointestinal bleeding which was difficult to control. The authors' successful outcome should be admirable. Horizontal part of the duodenum is often difficult to approach.**

**Please add the name and company of the endoscopy.**

**Response:** We wish to thank the reviewer for their kind comments. In accordance with the reviewer's suggestion, we have added the name and manufacturer of the endoscope, as follows:

Original text: "While performing a fluid infusion and blood transfusion, we conducted an emergent upper GI endoscopy"

Revised text: "While performing a fluid infusion and blood transfusion, we conducted an emergency upper GI endoscopy (GIF-Q260J; Olympus, Tokyo, Japan)"

**Where were the two clipped ulcers? Were they located oral side of Figure 1? Was the ulcer in Figure 1 located in the most anal part? Please show the clipped two ulcers.**

**Response:** We appreciate the reviewer's insightful comment. Both of the clipped ulcers were located on the oral side in Figure 1. The third ulcer was located in the most anal part. Unfortunately, we do not have any images of the two clipped ulcers because of the patient's emergent condition. Therefore, in response to this comment, we have revised the case description as follows:

Original text: "Hemostasis was achieved in two ulcers endoscopically by clipping, but as the ulcer located on the posterior wall of the horizontal portion of the duodenum was difficult to clip, we decided to perform TAE.

Preoperative contrast-enhanced computed tomography (CT) was not obtained because her vital signs were poor.”

Revised text: “Two of the ulcers were successfully treated by endoscopic clipping; however, the remaining ulcer on the most anal side, on the posterior wall of the horizontal portion of the duodenum, could not be clipped. Because her vital signs were rapidly declining, we decided to perform transcatheter arterial embolization (TAE), which is less invasive than surgical treatment. Preoperative contrast-enhanced computed tomography (CT) was not done because her vital signs were too poor.”

**Was clipping tried to the ulcer in Figure 1? Did the clipping device reach the ulcer in Figure 1?**

**Response:** Yes, as indicated in Figure 1, the endoscope was able to reach the ulcer. Although we tried endoscopic clipping of the ulcer, this procedure was unsuccessful.

**Please add the results of blood examination in tables.**

**The patient was in shock state. Please present vital signs.**

**Response:** As suggested by the reviewer, we have added Table 1 showing the results of blood tests performed on arrival. We have also revised the text as follows:

Original text: “A hemorrhagic duodenal ulcer was suspected because of her

depressed consciousness level and vital symptoms indicating shock and anemia.”

Revised text: “On arrival, the patient exhibited impaired consciousness. Her systolic blood pressure was 63 mmHg, pulse rate was 130 bpm, and SpO2 was 100% in room air. The results of blood tests (Table 1) indicated anemia, so a hemorrhagic duodenal ulcer was suspected.”

We wish to thank the reviewers for their valuable comments.

In accordance with the Guidelines and Requirements for Manuscript Revision of Case Report, we have added the running title “Successful TAE of a hemorrhagic duodenal ulcer” and included “case report” in the keywords.

We have also included the Core tip, Author contributions, Article Highlights and Footnotes in accordance with the journal guidelines, as follows.

Core tip: We report a rare case of a hemorrhagic duodenal ulcer fed by a renal artery that was successfully treated by transcatheter arterial embolization. In general, the duodenum is fed by branches from the gastroduodenal artery or superior mesenteric artery. However, this patient had three right renal arteries and the hemorrhage was fed by the lower branch of the right renal artery. The lower branch of the right renal artery at the L3 vertebral level was at the same level as the horizontal portion of the duodenum. To our knowledge, this case

report is the first reported case in which a renal artery was responsible for a hemorrhagic duodenal ulcer.

Author contributions: Anami S and Minamiguchi H collected the patient's data, prepared the photos, and wrote the manuscript; Shibata N, Koyama T, Sato H, Ikoma A, Nakai M, Yamagami T and Sonomura T proofread and revised the manuscript; all authors approved the final version of the manuscript.

## **ARTICLE HIGHLIGHTS**

### ***Case characteristics***

A case of hypovolemic shock with a history of recurrent duodenal ulcers.

### ***Clinical diagnosis***

Hemorrhagic duodenal ulcer.

### ***Differential diagnosis***

Other hemorrhagic lesions.

### ***Laboratory diagnosis***

Vital signs and blood tests on arrival indicated hypovolemic shock.

### ***Imaging diagnosis***

Emergency endoscopy and CT revealed hemorrhagic duodenal ulcers.



### *Pathological diagnosis*

Not obtained.

### *Treatment*

Interventional radiology.

### *Related reports*

Based on our search of the literature, there are no other reported cases of hemorrhagic duodenal ulcer in which the culprit vessel was the right renal artery.

### *Term explanation*

Nothing.

### *Experiences and lessons*

In patients with a hemorrhagic duodenal ulcer and an anomaly of the right renal artery, the right renal artery could be the culprit vessel.

### **Footnotes**

Informed consent statement: Written and verbal informed consent was obtained from the patient's family for publication of this case report and accompanying images.

Conflict-of-interest statement: The authors declare no conflict of interest.

CARE Checklist (2016) statement: The authors have read the CARE Checklist (2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).