**Reviewer #1**

1. The criteria for selecting the reference/ control group is ambiguous.

A: The control group (K-LGIB) comprised all patients with suspected LGIB who were treated at our hospital between 1.1.2015 and 31.12.2016. We regret having expressed ourselves ambiguously. Patients who were already assigned to the angiography group were obviously not included in the control group. The text passage has been edited accordingly.

2. It is unclear why endoscopic hemostasis was more successful in the reference group as opposed to the CA group.

A: Thanks very much for this important note. We have extended and modified the discussion section. Among variable importance measures, endoscopic hemostasis was the most important parameter to distinguish between patients treated by endoscopy and those treated by angiography. We believe that the failure of primary hemostasis is a sign of hemorrhage that cannot be easily controlled by endoscopy, and should therefore be regarded as a decisive factor for modifying the treatment strategy.

3. The manuscript lacks a conclusion section.

A: A conclusion section has been added.

**Reviewer #2**

Abstract

1. What is the logical point of view of this paper? It is very contradictory. The authors have indicated the importance of interventional radiology supplemented with catheter angiography (CA) with trans-arterial embolization (TAE), but the results have proven the problems of CA, such as higher shock index and GBS, lower serum Hb, etc.

A: Thank you for this justified note. The problem addressed by the reviewer was an essential part of our analysis. Patients who receive a CA or a TAE in the course of their clinical treatment are usually in poorer general condition. This is evidenced by

their GBS, their shock index, and transfusions. We have specified this in the discussion section.

2. The aim does not match the topic at all.

A: Our aim was to identify clinical factors that indicate the likelihood of CA, possibly with a subsequent TAE. In our analysis, the failure of endoscopic hemostasis in primary endoscopy led to a significant difference in the subsequent course of treatment. We have emphasized the aim of the report in the text.

3. The patients underwent TAE or not. The distinction of patients should be clarified

A: Thank you very much for this note. We have clarified the distinction. In the CA-LGIB group, all patients received a CA. In case of evident contrast medium extravasation, a TAE was performed. We are aware of the fact that a prospective validation should be focused on patients with TAE in order to confirm our data; this aspect has been mentioned in the limitations. The results section has been modified and corrected accordingly.

4. The conclusion is blurring the points of the study. What is the clear concept of "interventional radiology" in this study? Does it mean CA with TAE? or?

A: The concept of our study was to analyze events leading to CA. Interventional radiology refers first and foremost to CA. In case contrast medium extravasation was demonstrated in the CA, a TAE was performed. We have addressed the problem in greater detail in the discussion section. Thanks for the note. We have added the word “diagnosis”. We believe it is important to involve a radiologist early in the diagnostic and therapeutic procedure.

Introduction

1. The ultimate purpose for which the authors conducted this retrospective study (solving an existing known problem? or exploring a new problem?) did not provide at all. The last paragraph: what does the mean of "further radiological treatment in the course of disease"?

A: “We still do not know when the clinician should conclude endoscopic procedures to control gastrointestinal bleeding, whether CTA has an effect on the outcome, and whether patients with no or a negative CTA should also be scheduled to undergo angiography.”

Thank you very much for this assessment. A major limitation of our study was its retrospective nature over a period of 10 years. We believe that the value of angiography in the course of treatment must be investigated prospectively. Specifically, the investigation should focus on when this treatment procedure should be used in accordance with the gold standard of endoscopy. We have tried to describe this in greater detail in the last paragraph. In our retrospective analysis, further radiological treatment refers to the use of CA and TAE; this has been added.

Methods

1. Although the investigation of CA alone and CA with TAE was conducted separately, there was no information.

A: We thank you for your justified criticism. We have added the fact that all patients with contrast medium extravasation received a TAE and have mentioned, as part of the limitations of the study, that in the future it may be more meaningful to focus on contrast medium extravasation in CA and not merely on whether a CA was performed. However, a notable factor in this context is the changing character of LGIBs, which we have mentioned again in the limitations.

2. Inclusion and exclusion criteria are missing.

A: Thanks, we added that there were no exclusion criteria for the reference group.

3. The description of the statistical analysis method is missing.

We expanded the explanation of the applied statistical analysis methods in the material and methods section to include a description of the tests used for two-sample comparisons. The information regarding the more involved methods (random forest and decision trees) was left unchanged, as a detailed description of the algorithms and the underlying statistical methods is provided in the cited publications of the employed R packages (randomForest and party). We hope this

provides the information needed to retrace our analysis while dispensing with excessive technical details.

Results

1. Figure 1 does not seem to have been derived from this study.

A: Thank you for this remark. We are somewhat uncertain as to whether the reviewer is actually referring to Figure 1 (variable importance?). We believe the included data and the statistical methods used to process the data have been clearly explained. If the reviewer is referring to Table 1, which is also the subject of the next question, it is addressed below.

2. How to interpret Table 1? It did not specify in the results clearly.

A: A valuable point of criticism, which we have discussed and added to the limitations. Thank you very much. A clear shortcoming, and possibly the greatest shortcoming of this report, is the weak and non-standardized CT protocol and, consequently, the potentially inappropriate selection of patients for CA. As described in the report, clinical parameters such as hemodynamic instability and the absence of endoscopic treatment options were more likely the factors that led to performing a CA. Table 1 illustrates the weakness of the CT investigation and refers specifically to this point. We have modified a paragraph in the discussion section and given this aspect due attention in the limitations.

3. It is wondering what outcome differences could be inferred between patients in the CA-LGIB group who received TAE and those who did not. Relevant results have not been indicated or discussed.

A: Fully justified point of criticism. These data were not registered adequately. We have highlighted this aspect in the limitations. Based on this experience, probably the extravasation of contrast medium in CA should be used as an endpoint in the future.

Discussion

1. First paragraph: Is this fact? "CA and TAE have been established as successful treatment modalities for these patients over the last few years." The authors argue that this is not the case in this prospective study.

A: As cited, several studies have demonstrated the safety and efficacy of CA and especially TAE. Furthermore, we mention in our retrospective study that CA and TAE are meaningful, effective and safe therapy options. The previously described diagnostic parameters probably indicate that the failure of primary endoscopy is a sign of the patient being in poorer condition.

2. The point being discussed is unclear. It is wondering what point would like to discuss, between the positive and negative aspects of CA or CA with TAE. All results show negative clinical indicators, but it is inferred that the authors interpret them as positive.

A: We have tried again to clearly state that we did not investigate the outcome of CA as opposed to TAE or compare the two procedures. Rather, we investigated the clinical parameters that led to CA. Obviously, patients in whom primary endoscopy was successful were in markedly better condition because the problem was remedied.

**Reviewer #3**

Thank you very much for your constructive and friendly revision, and for recommending acceptance of our manuscript.