

Peer Review File

Article information: <https://dx.doi.org/10.21037/jtd-24-366>

Reviewer A

Comment 1: It focused on the safety of long-term use of esophageal stent but neglected to show its efficacy in achieving the intended purpose at the time of removal. Safety without efficacy or the desired therapeutic effect does not equate to success in treatment.

Reply 1: We agree, safety without efficacy of the desired therapeutic effect does not equate to success in treatment. Efficacy was not the intended outcome measure in our study, we looked at complications exclusively. Esophageal stents will continue to be utilized for the indications that the patients in our study received them, so regardless of efficacy we found it worthwhile to investigate the outcomes of our patients who had their stents maintained long-term.

Changes in the text: none

Comment 2: The need to study the safety of leaving esophageal stent inside for longer for various indications suggests that more indwelling time is required to achieve their targeted treatment effect. This manuscript did not actually compare its own indwelling time against published figures to tell for which indications were their stents left in longer.

Reply 2: In Table 5 there is data showing for which indications our stents were left in longer. We compared benign and malignant indications rather than more granular indications to allow the cohort sizes to be big enough for analysis.

Changes in the text: none.

Comment 3: "The prevalence of complications decreased as dwell time increased." This is different to the conclusion made in the main text "Long-term esophageal stent use, ...did not result in increased rate of stent related complications...". The sentence is also illogical because all stents have to go through 'standard' dwell time before it can reach "increased" dwell time. The stents have clearly pass through "standard" dwell time without complication in order to continue on to "increased" dwell time.

Reply 3: We appreciate you highlighting this discrepancy, we have adjusted the abstract accordingly. Changes in the text: In the abstract conclusion, we removed the prior sentence that "Long-term esophageal stent use, ...did not result in increased rate of stent related complications..." and now lines 73 to 74 read "Long-term esophageal stenting did not result in increased rates of stent related complications in our cohort."

Comment 4: Lines 101 to 110 – The 2 patients described here should not be under demographics. These 2 patients who had epigastric pain and broncho-esophageal fistula could be mentioned under a separate category such as stent related issues.

Reply 4: This paragraph highlights the demographics of the cohort as well as an overview of the complications, so we have adjusted the header to read "demographics and stent related issues" to address the point you make.

Changes in the text: line 96 in Results now reads "Demographics and stent related issues."

Comment 5: Stent dwell time – Why did the authors decide to compare stent dwell time in 2-week intervals? This would greatly reduce the number in each 2-week interval to be able to do any meaningful statistical comparison. Not surprisingly, you get many p-value of 1.000 half of the time in Table 5 if you attempt to compare stent complications this way. It is far more important to classify if the stent had done its job during its dwell time and the intended therapeutic effect for whatever indication was achieved or not achieved and therefore removed after the intended effect was achieved (or assumed to have achieved) or failed to achieve and a different intervention was required (or performed). The readers would like to know whether the 12 anastomotic leaks and 12 esophageal perforation had healed with stenting, and whether the 2 anastomotic strictures and 7 benign esophageal strictures had improved or resolved with stenting? For malignant or palliative indications, did the stent remain functional until esophagectomy or until the end of life of the patients? How many of the stents crossed the gastro-esophageal junction? For stents that crossed the gastro-esophageal junction, was reflux symptom more prevalent and did it cause problem such as esophagitis? The fact that only one of all your patients had reflux may suggest under-reporting of symptoms. It would also be useful to include how you decide on the stent dwell time, i.e. how did you decide when to remove the stent? This information will aid other potential users of esophageal stent to decide on the same.

Reply 5: Thank you for these worthwhile points, we appreciate the thorough review of our methodology. Regarding the comparison of stent dwell time in 2-week intervals, we acknowledge that this approach may have limitations in terms of statistical power, especially with smaller sample sizes within each interval. Our intention was to explore potential trends in complication rates across different durations of stent dwell time. Future endeavors would certainly be worthwhile to classify efficacy and decisions in therapeutic management, but this was not the intention of our study.

Changes in the text: none

Comment 6: Figure 1:

90 stents were placed but the number at risk at 0 days was 88. Can you account for the 2 missing stent placements? Did the 2 procedures fail and the stents removed on the spot?

Reply 6: Thank you for your detailed review, we regret this oversight that resulted from the way the figure was produced by our statistical software and will update Figure 1 accordingly. The number at risk at 0 days should be 90.

Changes in the text: Figure 1 revised to display the number of stents at risk at 0 days to be 90.

Comment 7: Table 1: Patient based demographics, stent indications and complications.

Please indicate what Stent 1 to Stent 5 represent. Are you showing the survival time of the stents (before removal or additional stent placement or until death) in patients who had only one stent (stent 1) to patients who had 5 stents placed (or 4 replacements) in total? If patients had multiple stents inserted, was the previously placed stent removed or was it stent-over-stent placement?

Reply 7: Exactly as you described, table 1 Stent 1 through 5 shows the length of dwell time of the stents. Stent 1 to 5 represent serial stents in the same patient, depending on the patient and pathology this may mean stent exchange or stent-over-stent placement.

Changes in the text: none

Comment 8: Discussion:

From Table 1, there are 14 out of 56 patients who had stent migration but in Table 2, 23 out of 90 stents migrated. This indicates 9 ($23-14 = 9$) stents that migrated actually occurred repeatedly (i.e. not for the first time on the same patient) after the initial stent migration. With such a modestly high 25% rate of stent migration, no discussion was made on why this is the case. Did crossing of the gastro-esophageal junction predispose to higher migration rate due to less stent contact to esophagus? Did the choice of using a smaller diameter stent (19mm vs 23mm) also predispose to higher migration rate? Did chemotherapy and/or radiotherapy treatment predispose to this? Did the authors modify their techniques or selection of stent size accordingly during or after the reported study period?

Reply 8: The third paragraph of the discussion discusses the stent migration observed in this study. Our data does not include information on crossing of the gastro-esophageal junction, or chemotherapy/radiation. It would certainly be interesting to investigate the impact of these variables in future work. As noted in this discussion, the use of endoscopic suturing or use of over-the-stent clips to reduce this migration rate is something our group has investigated implementing.

Changes in the text: none

Comment 9: Line 194-196: Please rephrase the entire sentence as it cannot be understood.

Reply 9: We regret the confusion; the sentence has been reworded with the intention of improving clarity.

Changes in the text: line 194-196 adjusted from “Moreover, our population findings pool stent indications due to small number of patients within each group, making it difficult to draw conclusions for individual indications.” To instead read “Furthermore, our analysis combines data on stent indications due to the limited number of patients within each group, hindering our ability to draw distinct conclusions for individual indications”

Reviewer B

Excellent summary experience of single institution and single manufacturer stent placement in greater than 30 days. While it may be somewhat atypical for so many stents to be used per patient - almost 2 stents per patient in this group, the study did still show that there were no major complications of esophageal erosion or aorto-esophageal fistula which is feared with more than a 4 week dwell time. The use between benign and malignant conditions may potentially confound the outcome but overall I feel the authors intent to show no long term harm out to 8 weeks with esophageal stenting for malignant conditions is established, even when multiple stents are used.

Comment 1: I would really like the authors to explain why they had to use multiple stents in so many patients.

Reply 1: We appreciate the interest in understanding the rationale behind the use of multiple stents in many of our patients. The decision to employ multiple stents in some cases was based on several clinical factors, including the extent and complexity of the underlying pathology, the location and length of the stricture or lesion, and the need for optimal coverage and support within the esophagus.

Changes in the text: none

Reviewer C

I have read and reviewed the submitted manuscript “Safety of Long-Term Esophageal Stent Use for Multiple Indications”. The authors should be congratulated. This paper has the potential to be an important work. However, stents are currently recommended to remain in place for 6-8 weeks and no more than 12, per ESGE guidelines. I would encourage the authors to review these points below and consider them in their revision.

Comment 1: Would the authors consider reworking this important manuscript using something closer to 60-70 days? This is important as the authors separate stent dwell time into < 30 days and > 30 days. An interesting analysis would be to separate the patients into cohorts closer to the ESGE guidelines. This might not be a bad idea as this would show 45 patients with > 60 days and 45 with < 60 days.

Reply 1: We appreciate the feedback and find this point interesting as it relates to the ESGE guidelines. Since their recommendation is classified as having low quality evidence, we decided to evaluate each 14-day interval to demonstrate more granular differences than dividing the cohort into > 60 days and < 60 days. Table 5, however, addresses the point you bring up by demonstrating complications for the 45 patients with stents > 60 days.

Changes in the text: none

Comment 2: Figure 1 might be improved with “any stent complications” (panel A) and a separate panel removing migration as a complication (panel B).

Reply 2: Thank you for this point, we have revised Figure 1 to include a 2nd panel that demonstrates time to complication when stent migration is removed as a complication.

Changes in the text: Updated Figure 1 to include a 2nd panel.

Comment 3: The complications “Other” should be more fully explained.

Reply 3: Table 2 breaks down stent based demographics, indications, and complications. Near the bottom of the table, underneath “stent complications” showing 14 “other,” there is an “other complications” header that breaks down what is included in that definition.

Changes in the text: none