

Letter and Author's Reply: Safety of Percutaneous Transhepatic Biliary Stenting in Patients with Obstructive Jaundice

Sir,

This is with regards to the article "Safety of percutaneous transhepatic biliary stenting in patients with obstructive Jaundice" published in January 2019 issue of this journal.

Although a study of a considerable importance, it appears that there is a lack of international literature review in the explanation of results, particularly the major complications. In all patients, there was 100% technical success with significant improvement in bilirubin levels. This is comparable to a study by Kloek *et al.* in 2010, where considerable difference between technical success rates were seen with percutaneous stenting as compared to endoscopic stenting with a significantly high infectious rate in endoscopic procedure (42%).¹ They described an infection rate of 9% for the percutaneous stenting group, whereas, in this cohort the rate was at 5.8%, which is touching the benchmark for the quality improvement guidelines (2003) for percutaneous transhepatic cholangiography (PTC) and biliary drainage.² The technical success of PTC over endoscopic stenting has also been clearly established in a study by Kwang *et al.*, where cholangitis and pancreatitis were more frequent in the endoscopic group (54.5% vs 22.6% in PTC).³ In a review by Madhusudhin *et al.* cholangitis rate ranged from 15 - 20%; whereas, in this group the rate of cholangitis was at 4% with none of the patients developing abscess.⁴

Death has been termed as the major complication. I believe that is a misinterpretation as only 6 patients had septicemia leading to death. Although the authors have taken care of confounding, they have not stated that amongst the 10 deaths, four succumbed to the disease as all patients with malignant disease were inoperable at the time of procedure. Furthermore, all deaths occurred beyond 6 weeks of the procedure as the study follow-up for a 6-week bilirubin level is present for all patients. Thus, death as a complication is a misnomer as procedure-related deaths usually occur in the same admission as the stenting; or soon thereafter as stated by Vandenebeele *et al.*, who reported a mortality rate of 33% with 3 deaths secondary to procedure-related mortality.⁵ The deaths in this study are actually the mortality rate, which is at 9.8% between 8-12 weeks.

This is in accordance with a review of 13-year data of 16,663 patients in the United Kingdom, where mortality rates at 30 days were reported as 23.1% with a major complication rate of 35.7%.⁶

CONFLICT OF INTEREST:

Author declared no conflict of interest.

AUTHOR'S CONTRIBUTION:

Substantial contributions to the design of the work; drafting the work and revising it critically for important intellectual content; approved the final version to be published.

REFERENCES

1. Kloek JJ, van der Gaag NA, Aziz Y. Endoscopic and percutaneous preoperative biliary drainage in patients with suspected hilar cholangiocarcinoma. *J Gastrointest Surg* 2010; **14**:119-25.
2. Burke D, Lewis C, Cardella J. Quality improvement guidelines for percutaneous transhepatic cholangiography and biliary drainage. The Society of Interventional Radiology Standards of Practice Committee. *J Vasc Interv Radiol* 2003; **14**:S243-6.
3. Kim KM, Park JW, Lee JK. A comparison of preoperative biliary drainage methods for perihilar cholangiocarcinoma: Endoscopic versus percutaneous transhepatic biliary drainage. *Gut Liver* 2015; **9**:791-9.
4. Madhusudhan KS, Gamanagatti S, Srivastava DN, Gupta AK. Radiological interventions in malignant biliary obstruction. *World J Radiol* 2016; **8**:518-29.
5. Vandenebeele LAM, Dhondt E, Geboes KP. Percutaneous stenting in malignant biliary obstruction caused by metastatic disease: Clinical outcome and prediction of survival according to tumor type and further therapeutic options. *Acta Gastroenterol Belg* 2017; **80**:249-55.
6. Rees JG, Mytton J, Evison F. Outcomes of percutaneous transhepatic cholangiography for the palliative relief of malignant jaundice in England between 2001 and 2014. *Gut* 2016; **65**: A45.

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AUTHOR'S REPLY:

We are thankful to Tanveer ul Haq for his interest in our study and his constructive comments. As this was a

resident's dissertation-based article, we do acknowledge that some shortcomings of the literature review might have occurred due to limited access. We also accept Haq's viewpoint that the deaths were probably secondary to the underlying disease rather than the procedure itself. The vast majority of patients who presented to the Department were in stage 4, and had been refused surgery. Thereby, making them inoperable at the time of stenting as only 3 patients had benign disease and the rest had malignant disease. This is in concordance with the previous literature.^{1,2,3} The term complication rate, therefore, is in fact the mortality rate and outcome of the disease rather than the procedure-related complication and is compatible with published literature.⁴

REFERENCES

1. Gracanin AG, Kujundzic M, Petrovecki M, Romcic Z, Rahelic D. Etiology and epidemiology of obstructive jaundice in Continental Croatia. *Coll Antropol Mar* 2013; **37**:131-3.
2. Sharma MP, Ahuja V. Aetiological spectrum of obstructive jaundice and the diagnostic ability of ultrasonography: A clinician's perspective. *Trop Gastroenterol* 1999; **20**:167-9.
3. Syed N, Mohammad SA, Umair UI, Shafiq UR: Etiological spectrum of obstructive jaundice. *Med Channel* 2010, **16**: 299-301.
4. Rees JG, Mytton J, Evison F. Outcomes of percutaneous transhepatic cholangiography for the palliative relief of malignant jaundice in England between 2001 and 2014. *Gut* 2016; **65**:A45.

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