Reviewer’s report

Title: Risk factors and outcomes of postoperative pancreatic fistula after pancreatico-duodenectomy: an audit of 532 consecutive cases

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Reviewer: Vladimir Lyadov

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The study “Risk factors and outcomes of postoperative pancreatic fistula after pancreatico-duodenectomy: an audit of 532 consecutive cases” by SJ Fu, SL Shen et al. addresses an important and clinically relevant topic – the impact of pancreatic fistula (PF) on the results of pancreatico-duodenectomy. The authors aimed to evaluate the risk factors affecting PF formation and the impact of fistula on clinical outcomes.

Abstract
Discretionary revision:
as far as the risk factors are analyzed before the outcomes, it would be logical to change risk factors and outcomes in the Conclusions part of the abstract.

Introduction
Discretionary revision:
a brief reference to the risk factors of PF already described in the literature might be useful, especially as the used literature ([7-10]) gives a good clue to that.

Minor essential revision:
some of the used references represent series from one center ([1,2,6]). Probably, [6] would suffice.

Material and Methods
Discretionary revision:
1) details regarding biliary drainage might be excessive, as there is no further analysis according to the subtypes of drainage. Perhaps, the percentage of patients with biliary drainage would suffice.
2) 90-day post-operative mortality might be used as far as a good deal of patients with PF can live longer than 30 days in ICU and still succumb to the disease.
3) Perhaps, variables included into the univariate analysis might be mentioned with some additional brief explanation.

Major compulsory revision:
the authors use a universally used definition of PF. However, the same International Study Group on Pancreatic Surgery (ISGPS) suggested similar definitions for delayed gastric emptying (DGE) and post-pancreatectomy
hemorrhage (PPH). Also, the authors refer to the Clavien-Dindo classification of complications ([7]), but do not use it. Those are universally accepted classifications which are most necessary to be used so that the presented results could be compared to other series.

Results

Minor essential revision:
1) data regarding the number of PF in patients with rare indications for Whipple (like 3 out of 6 cases etc.) cannot show the rate of PF due to the small number of events. Perhaps, table 1 could be made much shorter or skipped.
2) the section on post-operative outcomes could be more precise. Dindo-Clavien classification of complications should be used which also affords to compare mild vs severe complications

Discussion

Discretionary revision:
A brief overview of the natural limitations of the study could be helpful in the discussion

Minor essential revision:
1) Most of the studies showed that soft pancreatic tissue and narrow pancreatic duct are the most potent contributors to PF formation. Those studies shall be discussed in more detail, especially as in the present study the “softness” of the gland didn’t appear to influence the outcome.
2) The study of Bartoli et al. ([28]) is very old and hardly relevant today. However, lots of corresponding studies were published in the recent 5 years, that might be overviewed in the discussion
3) Conclusion regarding advantages of the duct-to-mucosa anastomosis cannot be driven by the present data. The authors claim that in their experience this anastomosis had better results, however, the choice of the anastomosis type was random. Naturally, surgeons tend to use d-to-m. anastomosis in patients with a wide duct and other types in narrow duct cases, which will inevitably lead to poorer results among other types. Such a question (and a conclusion) might be addressed in a randomized trial which is not the case. Perhaps, this moment might be skipped without losing of the papers’ quality.

The writing of the paper is quite clear.

Conclusion

The authors present a thorough analysis of an important clinical problem. The paper shall definitely be published after aforementioned revisions done, especially regarding the usage of modern classifications of complications.

**Level of interest:** An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
No competing interests