

Post-operative Pancreatic Fistulas: A single institution review of definition relevancy.

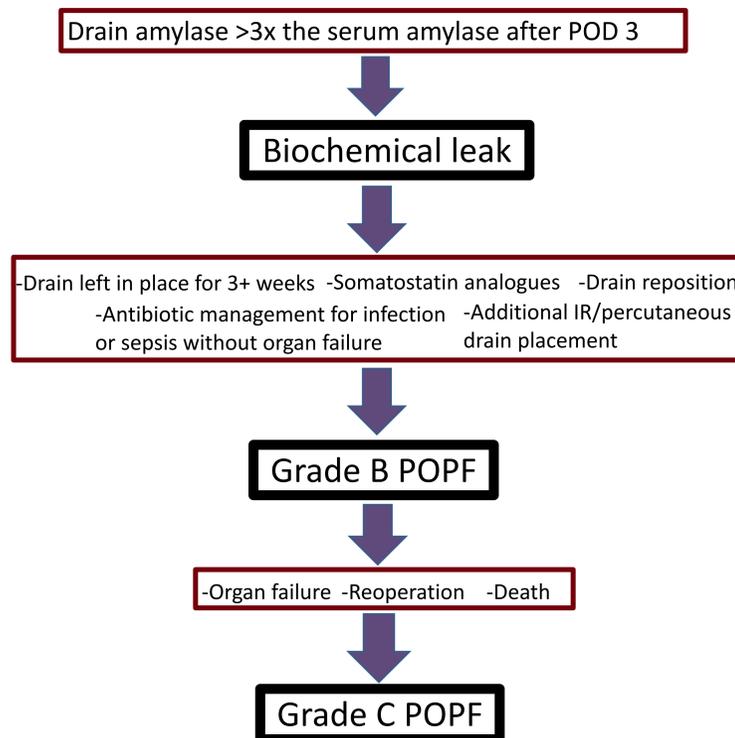
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Introduction

- Post-operative pancreatic fistulas (POPF) are a complication of pancreatic resections, particularly distal pancreatectomies (DP) and pancreaticoduodenectomies (PD) (Bassi et al. 2016)
- POPFs have an incidence of 27% (Pedrazzoli et al. 2020)
- POPFs have a 1.23% mortality rate, making it the greatest contributor to post-operative mortality following pancreatic resections (Pedrazzoli et al. 2020)
- In 2016, the POPF definition was updated to, "Any measurable drain output on or after postoperative day three with an amylase level that is >3x the upper limit of normal for each specific institution" (Bassi et al. 2016)
- Grading POPFs using the updated 2016 criteria (Bassi et al. 2016)
 - A biochemical leak occurs when the drain amylase is >3x the serum amylase, but there is no clinically relevant change to the patient's care
 - A grade B POPF requires a clinically relevant change in treatment. This encompasses a wide variety of changes, including antibiotic management, somatostatin analogue use, additional drain placement, repositioning of the drain, sepsis without organ failure, or leaving a drain in for 3 or more weeks due to persistent drainage
 - A grade C POPF requires organ failure, reoperation, or death
- Grade B POPFs are the most common and heterogenous type, which makes standardization of treatment difficult (Marchegiani et al. 2019)

Grading a biochemical leak/POPF (Bassi et al. 2016)



Aim

- We evaluated data to better understand POPFs and the implications of the current grading system in order to further standardize care and understand patients

Methods

- This was a retrospective evaluation of pancreatic resections between 3/1/2016 and 5/1/2021
- Patients for whom complete records were unavailable were excluded
- Diagnosis and grading of POPFs were made in accordance with the updated definitions set forth by the International Study Group of Pancreatic Surgery in 2016

Results

- The study included 156 patients, 31 of whom had a clinically relevant POPF (25 Grade B and 6 Grade C)
- The average length of stay among 156 patients included in this study was 10.5 days
- The 25 Grade B POPF patients had an average length of stay of 14.2 days, with a range of 3-32 days
- Average length of stay to change if patients received treatment or combinations of treatments
 - Grade B POPF Patients who had their drain in place for >3 weeks and no other changes in treatment had an average length of stay of 6.8 days
 - Grade B POPF patients who required antibiotic management and somatostatin analogues had an average length of stay of 18.5 days
 - Grade B POPF patients who required TPN had an average length of stay of 22.8 days

Management Type	# of Grade B POPF patients	Average length of stay (days)
All Grade B POPF Patients	25 (100%)	14.2
Drain kept in place > 3 weeks	16 (64%)	11.2
Additional drain placement	8 (32%)	14.1
Antibiotic management	14 (56%)	15.7
Somatostatin analogues	9 (36%)	18.1
TPN	8 (32%)	22.8



Discussion

- The Grade B POPF category is exceedingly broad and does not meaningfully stratify patients
- Creating new subcategories for Grade B POPFs would provide more relevant information on the severity of the POPF, thus eliminating some of the ambiguity that currently exists within this population
- Potential subcategories for Grade B POPFs based on this group of patients may include:
 - Patients who required TPN
 - Patients who required a combination of treatments
 - Patients who only had persistent drainage for >3 weeks
- Future research would investigate Grade B POPFs by way of more useful subcategories, and implement these subcategories to better assess clinical outcomes

Selected References

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