

Efficacy of Amniotic Membrane in Pancreatic Fistula

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Background

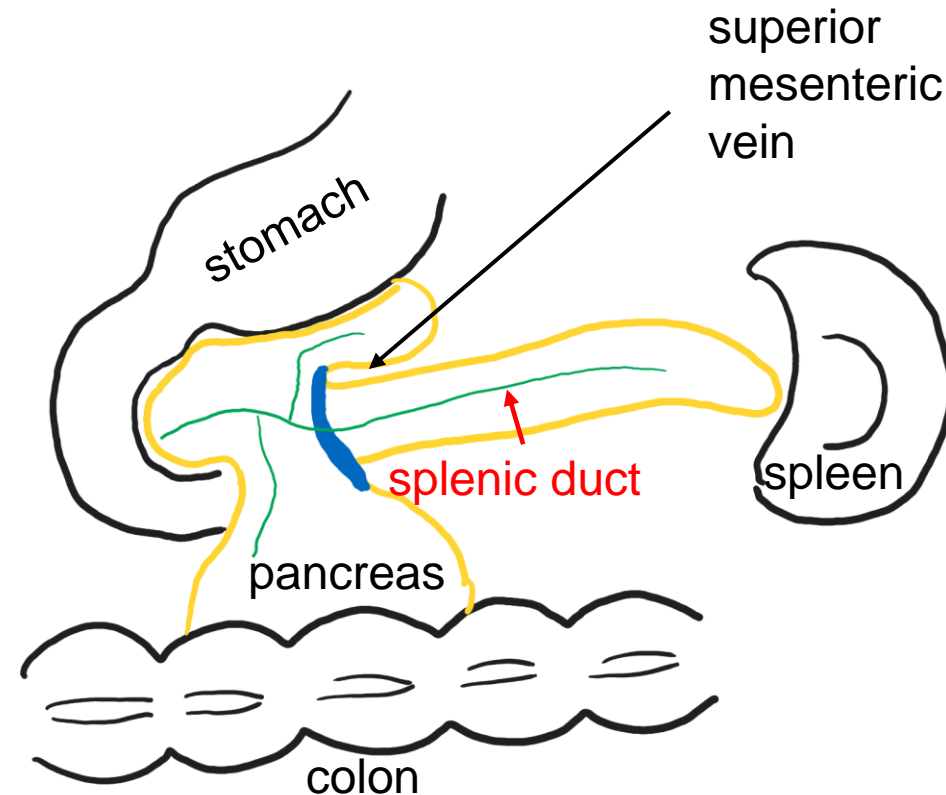
Postoperative pancreatic fistula is a complication that occurs after pancreatic surgery or gastric cancer surgery. Although this complication could be fatal, its treatment is mainly conservative with drainage

Amniotic membrane cells are known to secrete β defensin, elafin, and secretory leukocyte peptidase inhibitor (SLPI) and to secrete anti-inflammatory cytokines, wound healing factors. It is already used in the treatment of ulcers, burns, and in ophthalmology.

This study, we focused on the antibacterial, anti-inflammatory, and wound-healing effects of amniotic membranes and aimed to develop a treatment method for pancreatic leakage using amniotic membranes.

Method

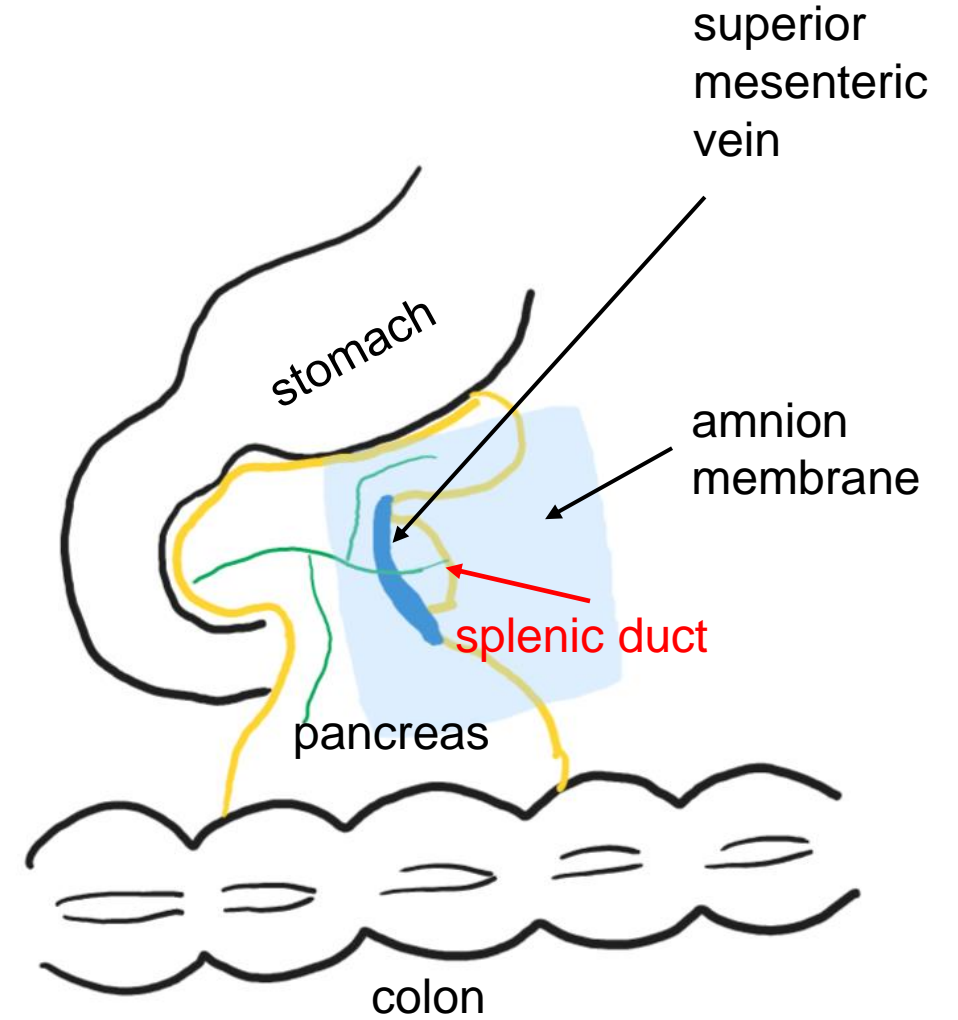
We will employ an established pancreatic fistula model created by surgical transection of the splenic duct.



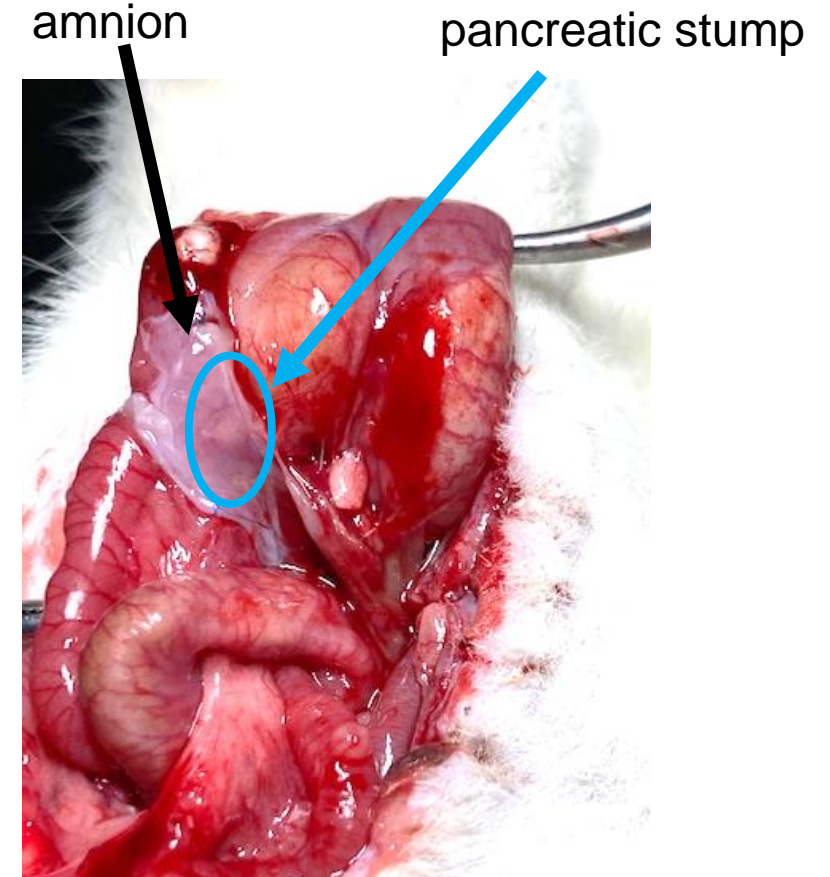
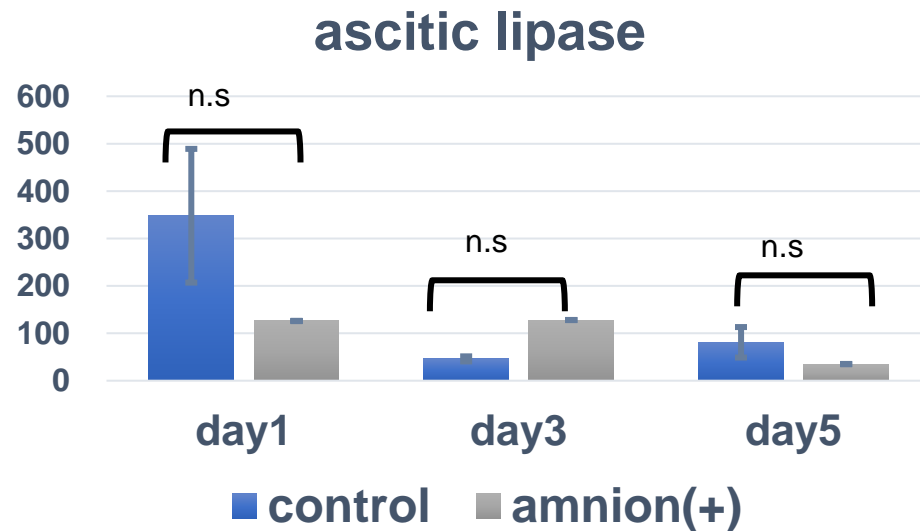
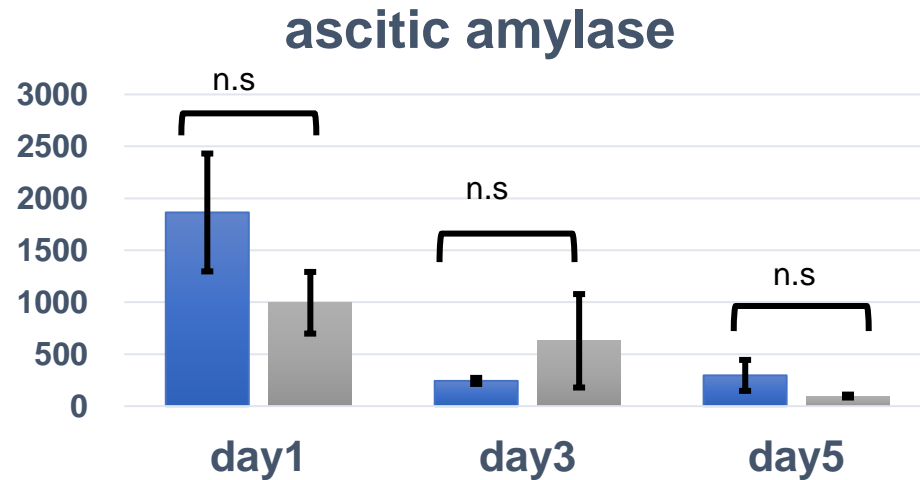
Method

Procedure

- After a midline laparotomy, the splenic duct was transected with the pancreatic parenchyma along the left border of the superior mesenteric vein and the pancreatic tail and spleen were removed.
- The pancreatic stump was covered with amnion membrane.
- Ascitic samples were obtained from the abdominal cavity on days 1, 3, and 5 after the operation and the levels of ascitic amylase, and ascitic lipase were measured.



Result



There was no significant difference in amylase and lipase levels.

Conclusions

Our results showed that amnion did not significantly accelerate the healing of pancreatic fistulas in this model.

This may be partly due to the large variation in amylase and lipase values in the ascites fluid.

Future studies will involve pathological examinations and the establishment of a more robust animal model to further evaluate the efficacy of this therapeutic approach.