

ISCHEMIC GASTRIC CONDITIONING BY PREOPERATIVE ARTERIAL EMBOLIZATION BEFORE ONCOLOGIC ESOPHAGECTOMY

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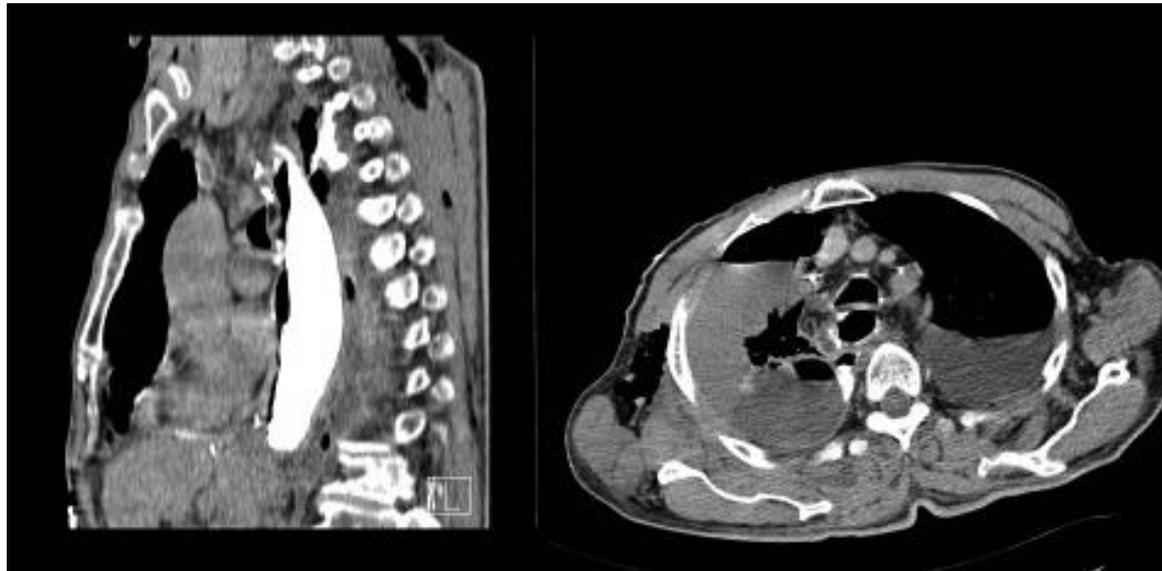
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- No relevant financial relationship reported

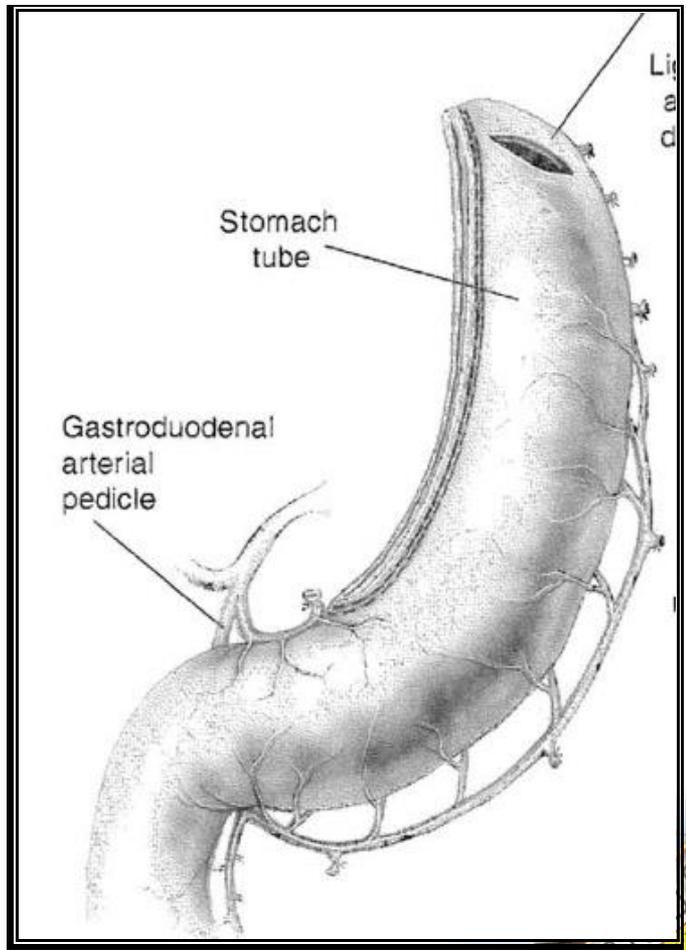
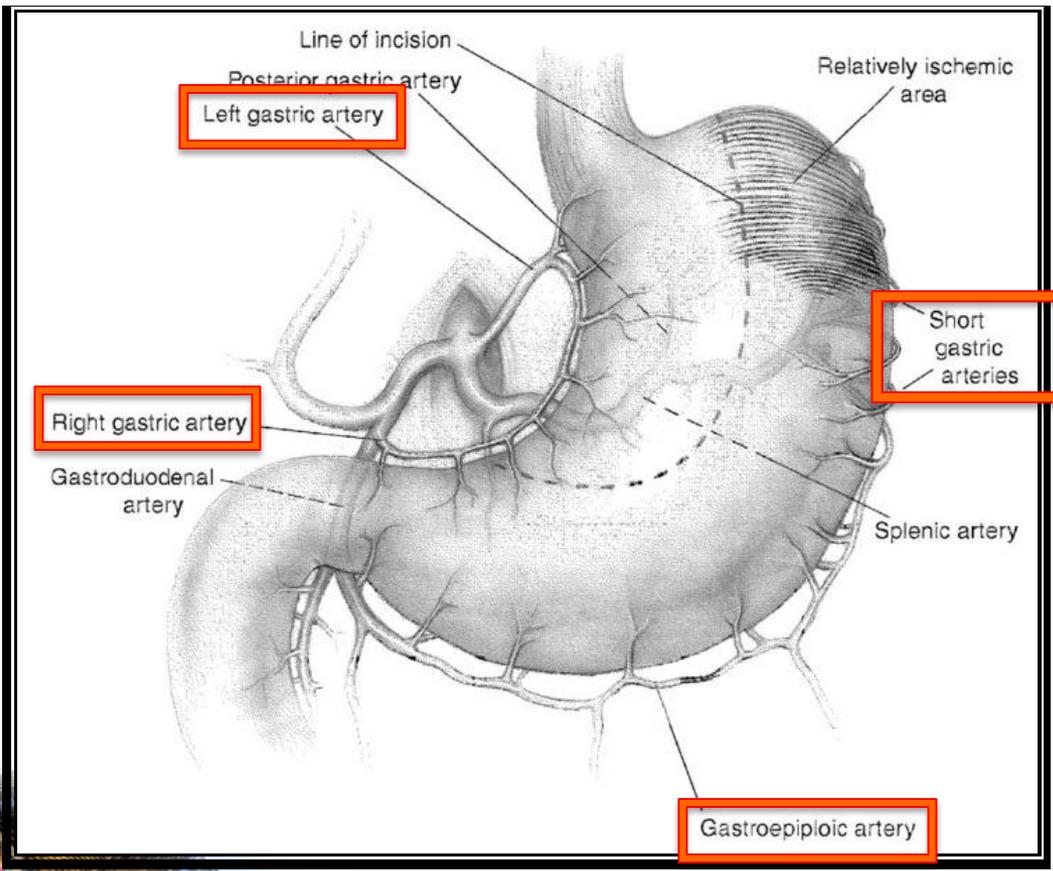


INTRODUCTION

- Oncologic esophagectomy
 - High morbidity (40-45%) and mortality (5-12%) rates
 - Early anastomotic leakage +++
 - Risk factors: malnutrition, uncompleted tumoral resection, cervical anastomosis, **gastric conduit ischemia** → **one third of postoperative deaths**



INTRODUCTION



→ Blood flow decreases but temporary



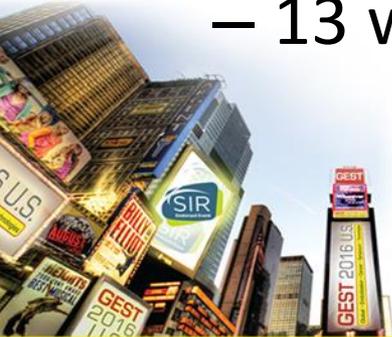
INTRODUCTION

- Gastric ischemic conditioning
 - Surgery
 - Surgical ligations of LGA, RGA, short gastric vessels
 - Requires general anesthesia
 - Risks of adherences: esophagectomy < 7 days
 - Preoperative arterial embolization (PreopAE)
 - Embolization of splenic artery, LGA, +/- RGA
 - Local anesthesia
 - No constraint of delay before esophagectomy



MATERIAL AND METHODS

- All patients who underwent oncologic esophagectomy between 2008 and January 2015
- In our academic center
- 59 patients divided into 2 groups:
 - 46 with PreopAE
 - 13 without ischemic conditioning



MATERIAL AND METHODS

- Preoperative arterial embolization
 - 4 Fr introducer sheath / Cobra Cordis Tempo[®] 4F catheter
 - Embolization of splenic artery + LGA + RGA
 - 2-3 days hospitalization stay
 - CT scan control before surgery (approximately 30 days after embolization)



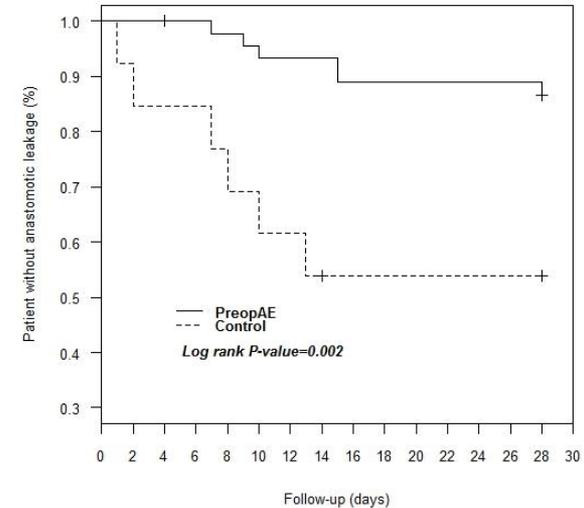
MATERIAL AND METHODS

- Primary outcome: effectiveness to prevent postoperative anastomotic leakage
- Secondary outcomes:
 - Postoperative mortality
 - Hospital length of stay
 - Complications related to embolization



RESULTS

- Anastomotic leakage:
 - PreopAE group: 6/46 (13%) → $p = 0,02$
 - Control group: 6/13 (43%)
- Anastomotic leakage requiring surgery:
 - PreopAE group: **0/46 (0%)** → $p < 0,001$
 - Control group: 3/13 (23%)
- Postoperative mortality:
 - PreopAE group: 1/46 (2%) → $p = 0,03$
 - Control group: 3/13 (23%)



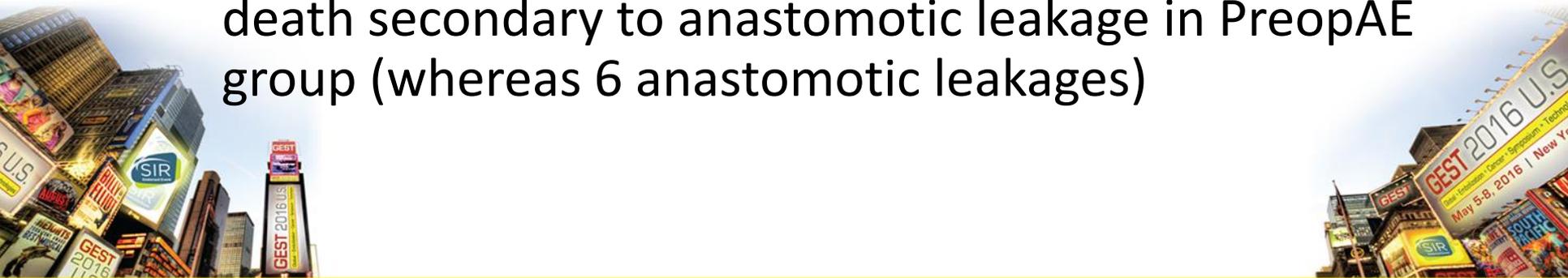
RESULTS

- Hospital length of stay: median (IQR)
 - PreopAE group: 14 (12-17)
 - Control group: 15 (14-17) **→** $p = 0,27$
- PreopAE group:
 - Failed right gastric artery embolization: 8/46 (17%)
 - Complications related to embolization:
 - Partial splenic necrosis: 18/46 (40%)
 - 4 with splenic necrosis > 30%
 - Pain (no Grade C SIR)



DISCUSSION

- Effective to prevent anastomotic leakage
 - PreopAE versus surgical ligations
- Difficult procedure: right gastric artery embolization ?
- Limits: control group?
 - High anastomotic leakage rate (46%) versus 10-25% in data literature
 - No anastomotic leakage requiring surgery and no death secondary to anastomotic leakage in PreopAE group (whereas 6 anastomotic leakages)



CONCLUSION

- Anastomotic leakage is a major issue in postoperative esophagectomy.
- Preoperative Arterial Embolization seems to be effective to prevent postoperative anastomotic leakage
- Low morbidity procedure

