Anastomotic leak prophylaxis using a vapor-heated fibrin sealant: report on 738 gastric bypass patients.

Authors: Sapala JA, Wood MH, Schuhknecht MP

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Abstract:

BACKGROUND: Excluding pulmonary embolism, anastomotic leak is the leading cause of death and major morbidity in patients undergoing open or laparoscopic gastric bypass operations. We observed a number of these leaks (11 out of 1,120 Micropouch(SM) gastric bypass [MGB] patients; 0.9%). The majority (80%) required emergency laparotomy and drainage, massive fluid resuscitation, and aggressive nutritional support. Therefore, we designed a 2-year, prospective study to determine the therapeutic efficacy of vapor-heated fibrin sealant to prevent anastomotic leaks at the gastro-jejunostomy (GJS) site.

METHODS: Between April, 2000 and March, 2002, 738 patients underwent a primary (n=671) or revisionary (n=67) MGB procedure. The gastric reservoir was limited to the cardia of the stomach. Vapor-heated fibrin glue 1 cc was applied circumferentially to a 12-mm, non-banded GJS anastomosis. Once activated, fibrin sealant polymerized into a soft, closely adherent gel. No omental patch was used to cover the fibrin-sealed anastomosis.

RESULTS: Of 738 patients, 2 required emergency laparotomy for leaks and 2 for adhesive bands that contributed to a distal small bowel obstruction. There were no anastomotic leaks at the fibrin-sealed GJS sites. No gastro-gastric or gastro-enteric fistulas were recorded.

CONCLUSION: Fibrin sealant applied to the GJS site appears to have eliminated anastomotic leaks

in our Micropouch(SM) gastric bypass patients. These results suggest that fibrin glue application may contribute to "leak prophylaxis" in patients undergoing open Rouxen-Y gastric bypass. Glue placements may also benefit patients undergoing a laparoscopic Roux-en-Y procedure, wherein anastomotic leaks have been reported early in the learning curve.