INITIAL EXPERIENCES WITH A VAC-STENT AS NOVEL TREATMENT OPTION FOR ANASTOMOTIC LEAKAGE IN THE UPPER GASTROINTESTINAL TRACT: A SINGLE-CENTER CASE SERIES

L.M.D. Pattynama[1-4], R.E. Pouw[3-5], J.J. Bergman[2], M.I. van Berge Henegouwen[1-4], W.J. Eshuis[1-3]

AIM

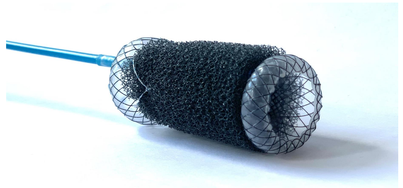
To describe the first experiences with the VAC-Stent for anastomotic leakage after upper gastrointestinal (GI) surgery in a tertiary referral center

BACKGROUND

Anastomotic leakage after upper gastrointestinal surgery is associated with severe morbidity.

Endoscopic vacuum therapy (EVT) has gained a greater role in treatment of these defects and is most often applied using endoscopically placed VAC-Sponges.

Recently, the VAC-Stent was introduced as new device to apply EVT, combining the benefits of negative pressure wound therapy and an intraluminal stent, while allowing for oral intake of a soft diet.



VACStent GI™ (MICRO-TECH Europe GmbH, Düsseldorf, Germany) Not yet commercially available outside of Europe.

METHODS

Prospective cohort study

All patients with anastomotic leakage in the upper GI tract treated with a VAC-Stent

Amsterdam UMC

March 2022 – March 2023

Outcome parameters

1. Success rate
2. Adverse events, treatment characteristics

RESULTS

Outcome parameters

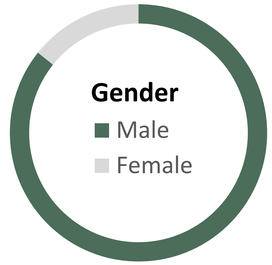




	Total (n = 14)	VAC-Stent and VAC-Sponge (n = 10)	VAC-Stent only (n = 4)
Time to diagnosis in days (IQR)	7 (5-9)	7 (5-8)	9 (6-13)
EVT-related endoscopies (IQR)	4 (3-7)	5 (4-11)	3 (2-3)
Treatment duration in days (IQR)	15 (12-35)	20 (14-49)	10 (7-14)
Follow up in days (IQR)	176 (74-269)	176 (83-340)	140 (67-235)
Stenosis, n (%)	4 (29)	4 (40)	0 (0)

Reason for combination with VAC-Sponge	10
Switch from VAC-Sponge to VAC-Stent	8
Later availability of, and less experience with VAC-Stent	6
Inadequate treatment with VAC-Sponge	2
Switch from VAC-Stent to VAC-Sponge	2
Inadequate sealing of defect with VAC-Stent at esophago-jejunal anastomosis	1
Need for intracavitary treatment	1

Baseline characteristics

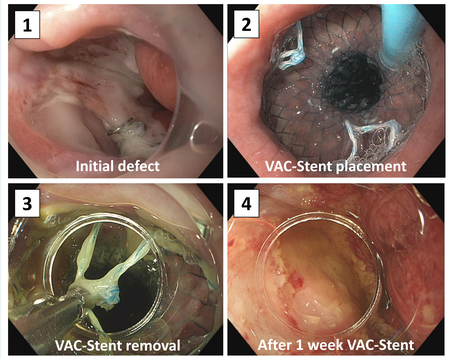


Median age
85

	Total (n = 14)
Defect size in dehiscence of circumference, n (%)	
Small (<10%)	10 (71)
Intermediate (10-40%)	3 (21)
Large (>40%)	1 (7)
Surgery, n (%)	
McKeown esophagectomy	8 (57)
Ivor Lewis esophagectomy	5 (36)
Total gastrectomy + Roux-Y	1 (7)
Level of anastomosis, n (%)	
Cervical	8 (57)
Thoracic	5 (36)
Abdominal	1 (7)

MECHANISM

Anastomotic leakage treated with 1 week VAC-Stent



CONCLUSION

The VAC-Stent combines the benefits of EVT and an intraluminal stent and shows great feasibility and efficacy in treatment of anastomotic leakage after upper gastrointestinal surgery. More research is necessary, as this device could possibly prevent major re-surgery in these patients.

AFFILIATIONS

1. Amsterdam UMC location University of Amsterdam, dept. of Surgery, Meibergdreef 9, Amsterdam, The Netherlands
2. Amsterdam UMC location University of Amsterdam, dept. of Gastroenterology and Hepatology, Meibergdreef 9, Amsterdam, The Netherlands
3. Cancer Treatment and Quality of Life, Cancer Center Amsterdam, Amsterdam, The Netherlands
4. Amsterdam Gastroenterology Endocrinology Metabolism, Amsterdam, The Netherlands
5. Amsterdam UMC location Vrije Universiteit Amsterdam, dept. of Gastroenterology and Hepatology, De Boelelaan 1117, Amsterdam, The Netherlands

Contact information
L. Pattynama, MD, PhD fellow l.m.pattynama@amsterdamumc.nl
www.EVT-academy.com

COI *R.E. Pouw* is consultant for MicroTech Europe and Medtronic bv., received speaker fee from Pentax and is on the advisory board of EsoCap AG. *M. I. van Berge Henegouwen*: MIvBH is consultant for Mylan, Johnson & Johnson, Alesi Surgical, BBraun and Medtronic, and received unrestricted research grants from Stryker. All fees paid to institution. All other authors have declared no conflict of interest

Amsterdam UMC University Medical Centers

SAGES 2023