COMPLICACIONES EN CIRUGÍA BARIÁTRICA LAPAROSCÓPICA

Prevención, Diagnóstico y Tratamiento

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LAPAROSCOPIC(=keyhole) WEIGHT LOSS OPERATIONS

1 Stomach reduction

- Gastric band
- Sleeve resection

2 Extreme stomach reduction + Mild reduction of caloric uptake

- Gastric Bypass

3 Mild stomach reduction + Extreme reduction of caloric uptake

- Scopinaro

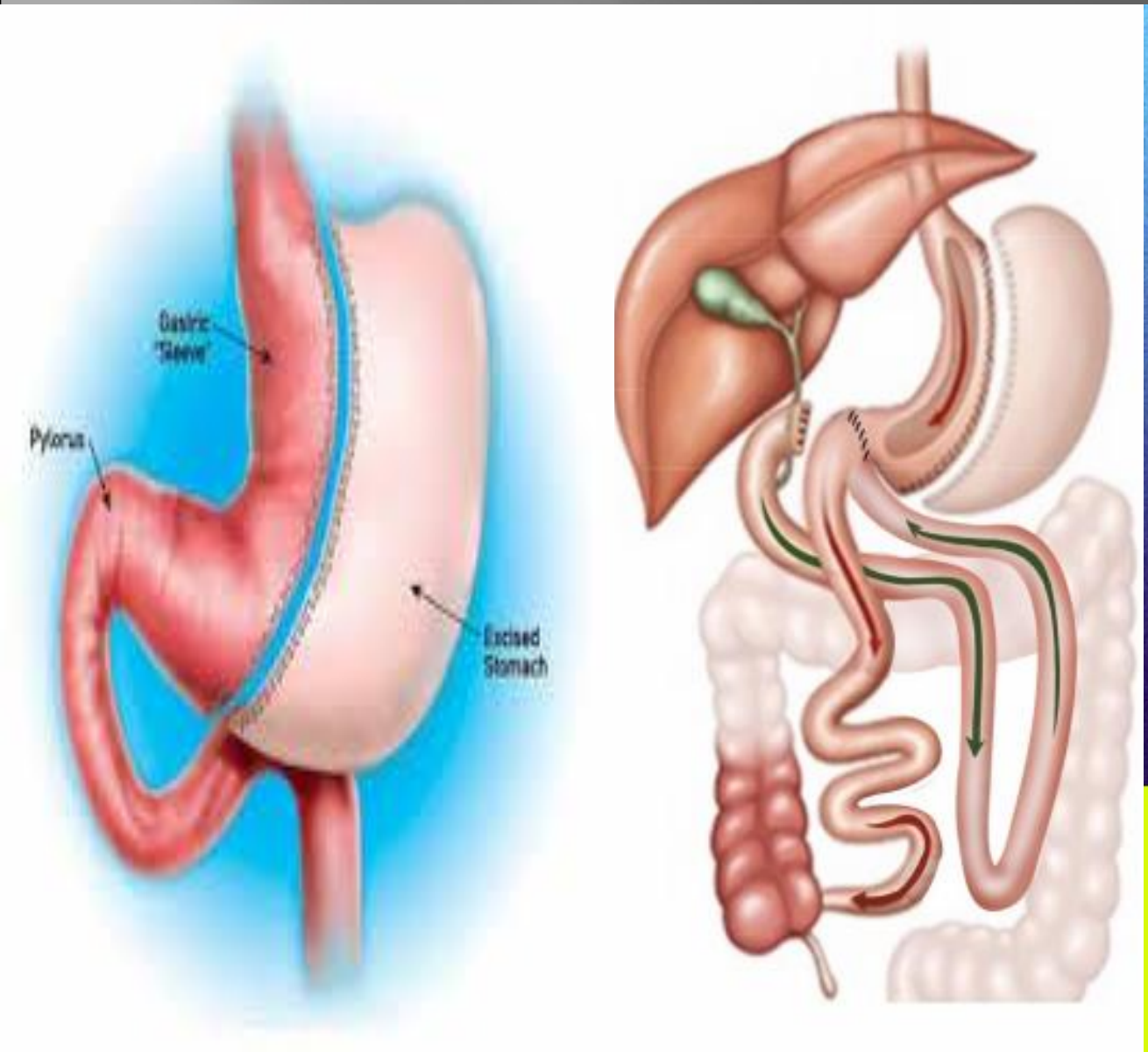
- Duodenal Switch

Hympens J. Sidney 2006

TÉCNICAS QUIRÚRGICAS REALIZADAS EN ALCOY

- BPGA (1977-1980): 16
- GVA (1983-1994): 129
- BGA (1995): 3
- BPGL (1997-2001): 44
- CDA (1994-2005): 525
- CDL (2000-2014): 420
- GVL (2002-2014): 306
- GV+DYL(2011-2014): 10

TOTAL 1453 pacientes



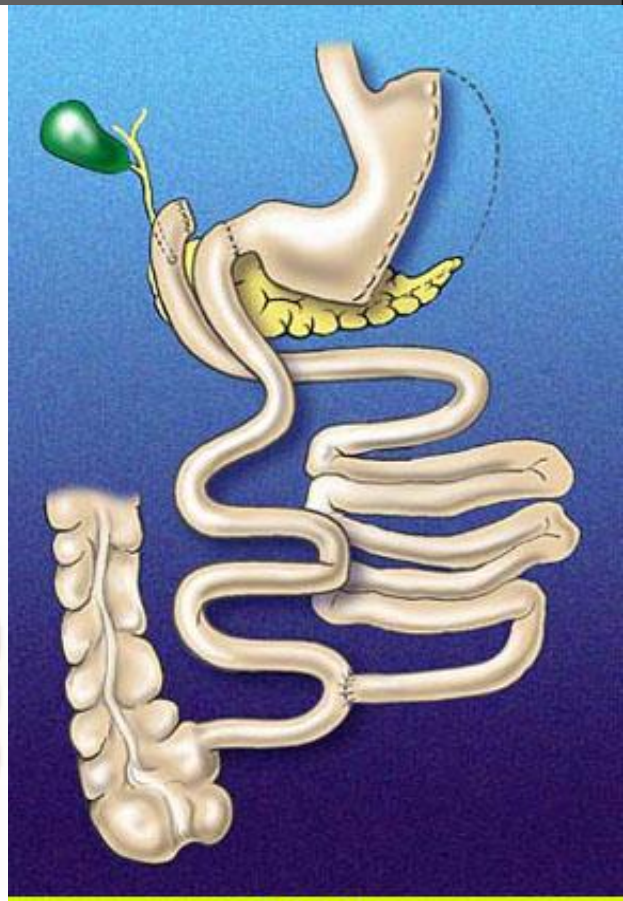
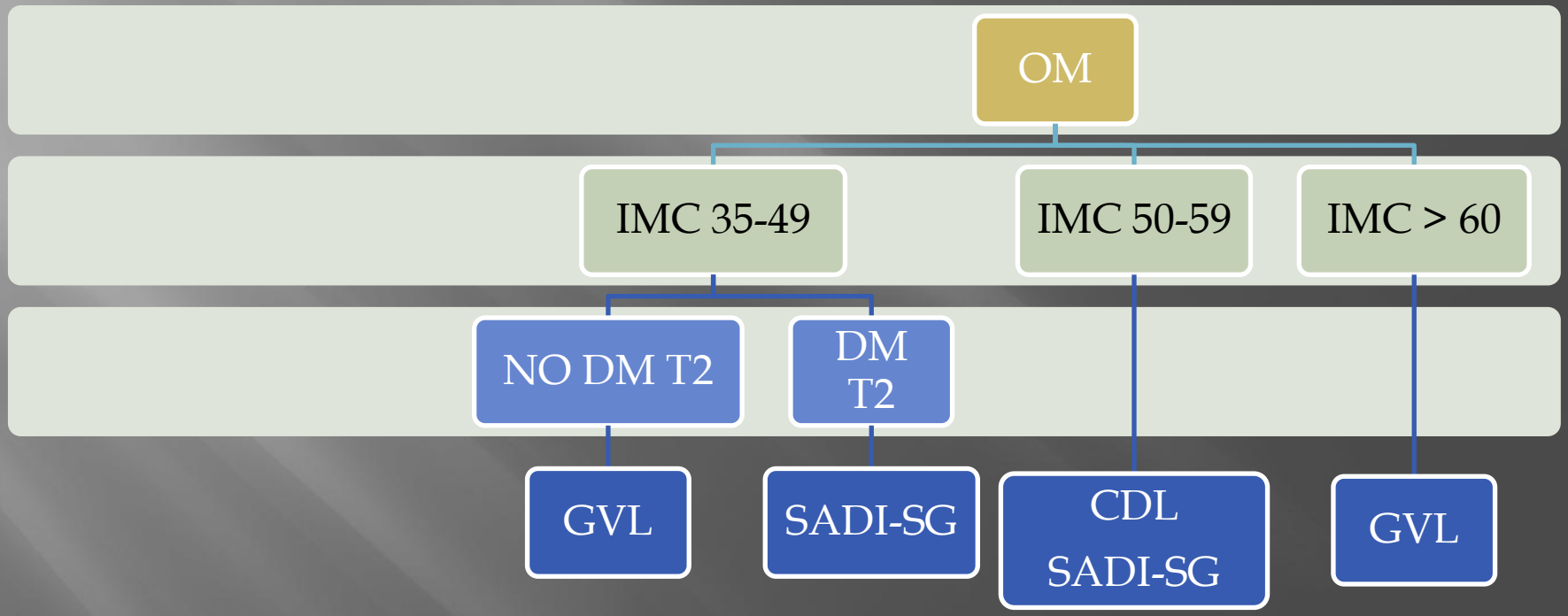


Fig. 5
Biliopancreatic Diversion (BPD) with Dudenal Switch (Marceau)

GVL SADI-SG CDL

ALGORITMO TERAPÉUTICO



COMPLICACIONES AGUDAS

- Hemorragia
- Lesión Esplénica
- Lesión Hepática
- Estenosis Gástrica

COMPLICACIONES POSTOPERATORIAS

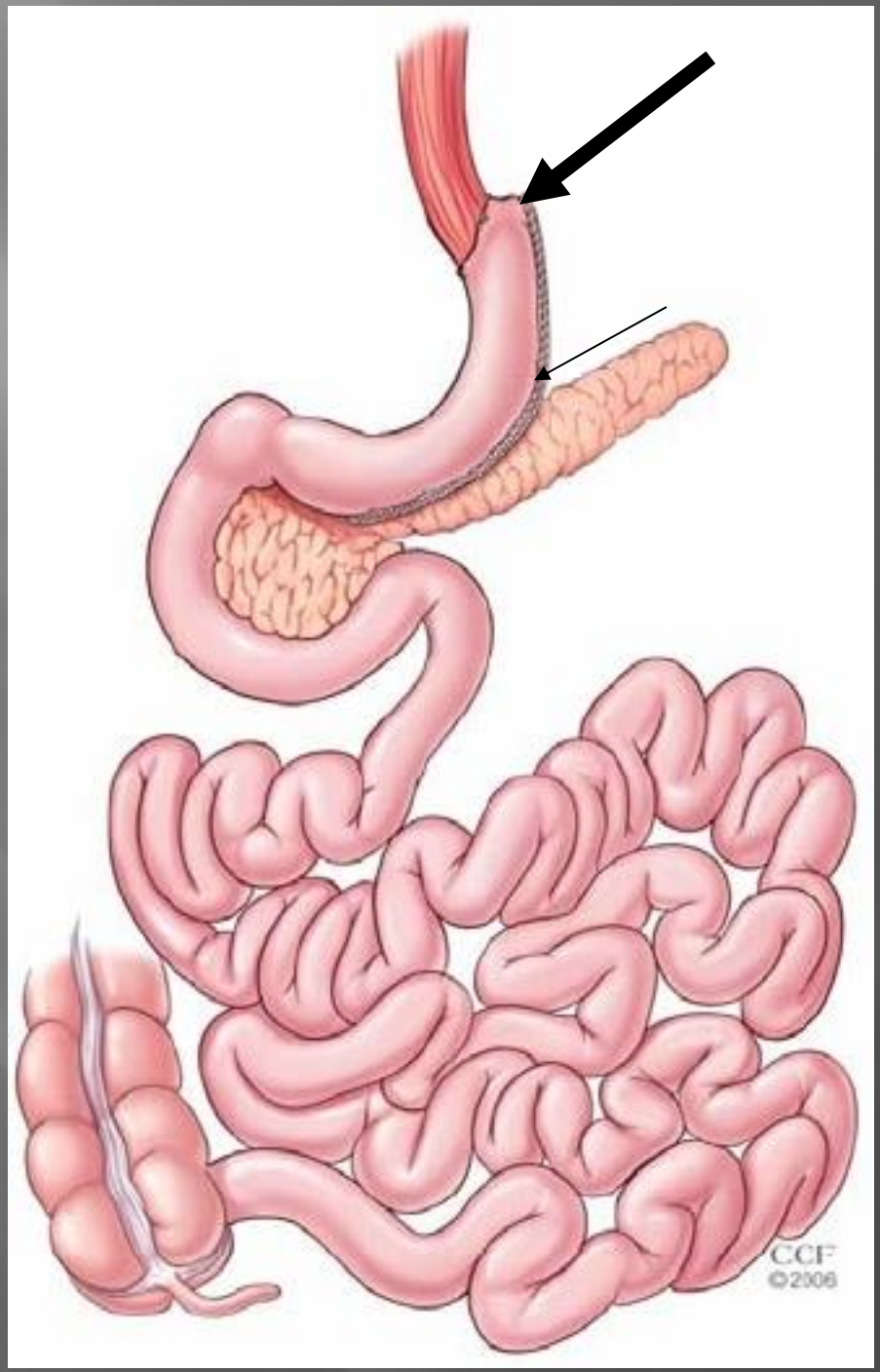
- Hernia
- Atonía Gástrica
- Nutricionales
- TEP

- Fugas
- Reflujo GE
- Estenosis Gástrica
- Reganancia de peso

COMPLICACIONES A LARGO PLAZO

- Déficit de Fe, Ca, Vit B, Vit A, D, E, K.
- Diarreas, problemas hidroelectrolíticos
- Malnutrición calorico-protéica.
- Obstrucción intestinal

FUGAS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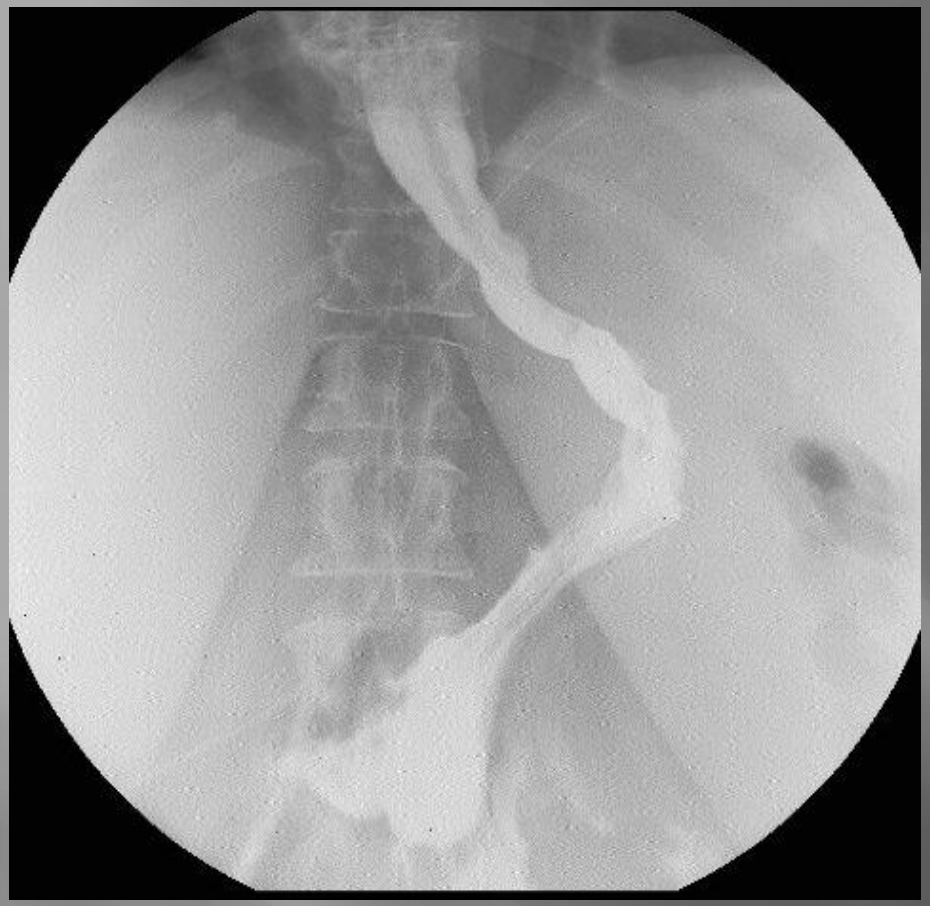
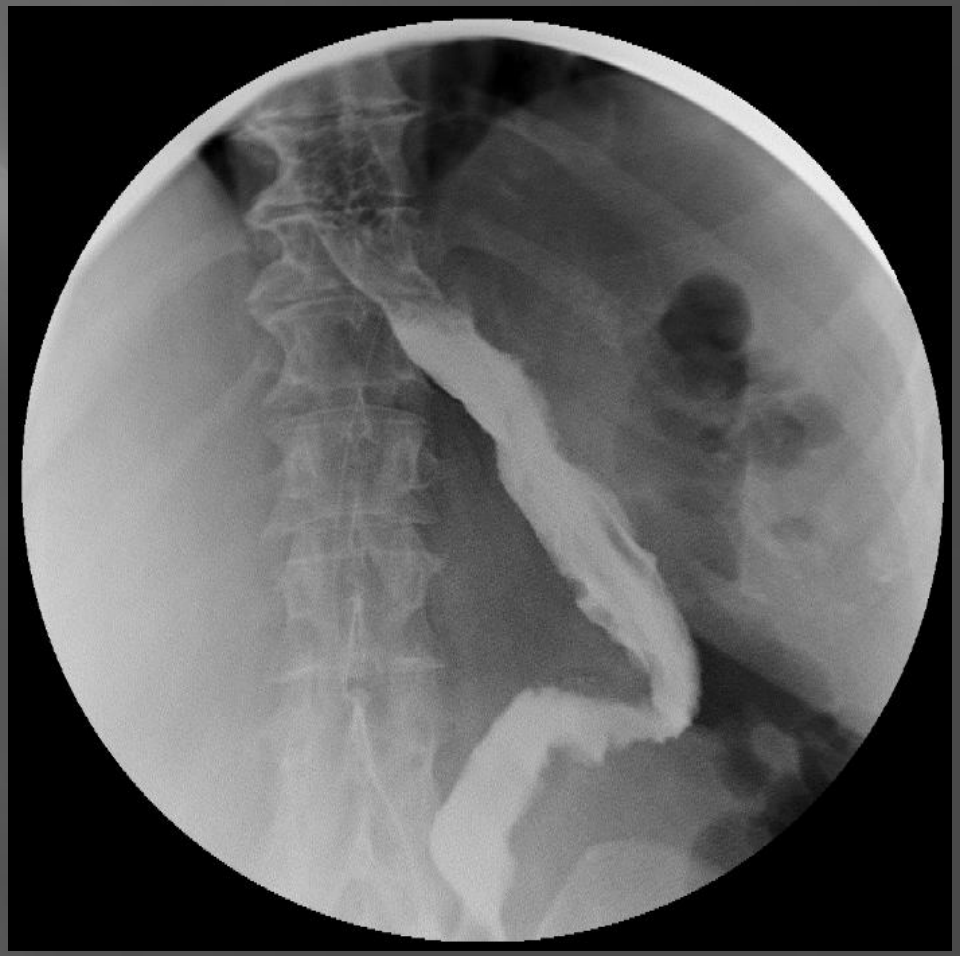
Tubo gástrico “correcto”





FUGAS TRAS GV

- Complicación más grave de cirugía bariátrica
- Incidencia 0,1-7%
- Localización más frecuente en UEG
- Suelen ser de pequeño tamaño
- Todas son peligrosas!
- Tratamiento inadecuado: Sepsis
- Abscesos, peritonitis, empiema.
- Elevada morbilidad y mortalidad: 6-50%
- Aparición: 2 días - 2 años ¡¡¡
- Factor de riesgo independiente de mortalidad

FUGAS. Clasificación.

- Tiempo
  - Agudas: 7 días
  - Tempranas: 1-6 semanas
  - Tardías: 6-12 semanas
  - Crónicas: > 12 semanas
- Clínica
  - Tipo I: Subclínicas: Fuga local sin diseminación
  - Tipo II: Clínicas: Con diseminación peritoneal
- Localización
  - Altas: 85%
  - Bajas: 15%

Causas de fugas en el ángulo de His

- Presión intraluminal elevada ??
  - Tubo estrecho
  - Estenosis
  - Disfunción pilórica
  - Tubo en forma de L, espiral: Helix stenosis
- UEG área débil, pared fina, vascularización precaria
- Vecindad de presión torácica negativa
- Ausencia de vísceras vecinas que tapen la fuga
- Trayectos fistulosos largos y tortuosos

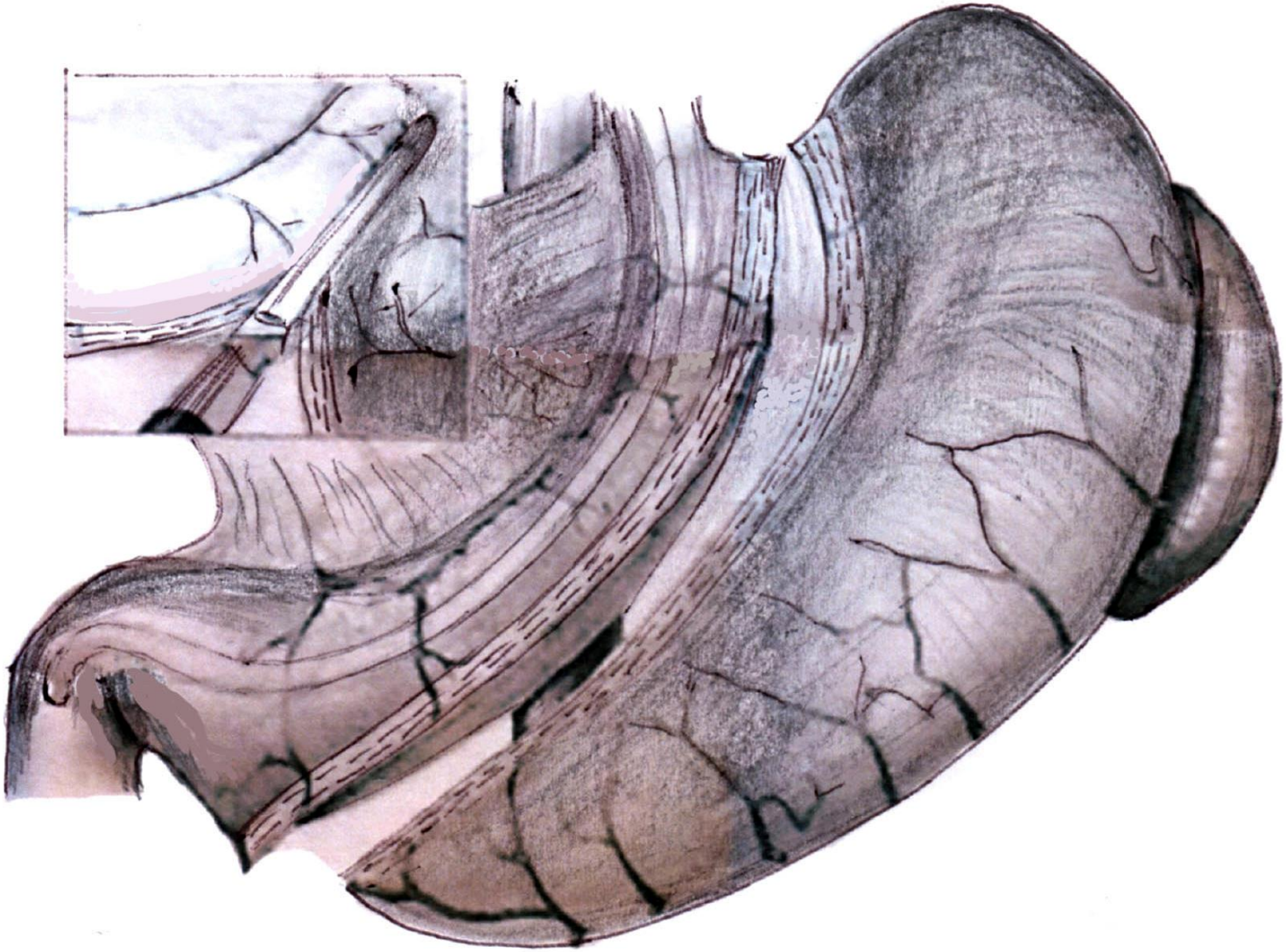
Zundel N et al. Surg Laparosc Percutan Tech 2010; 20: 351-6

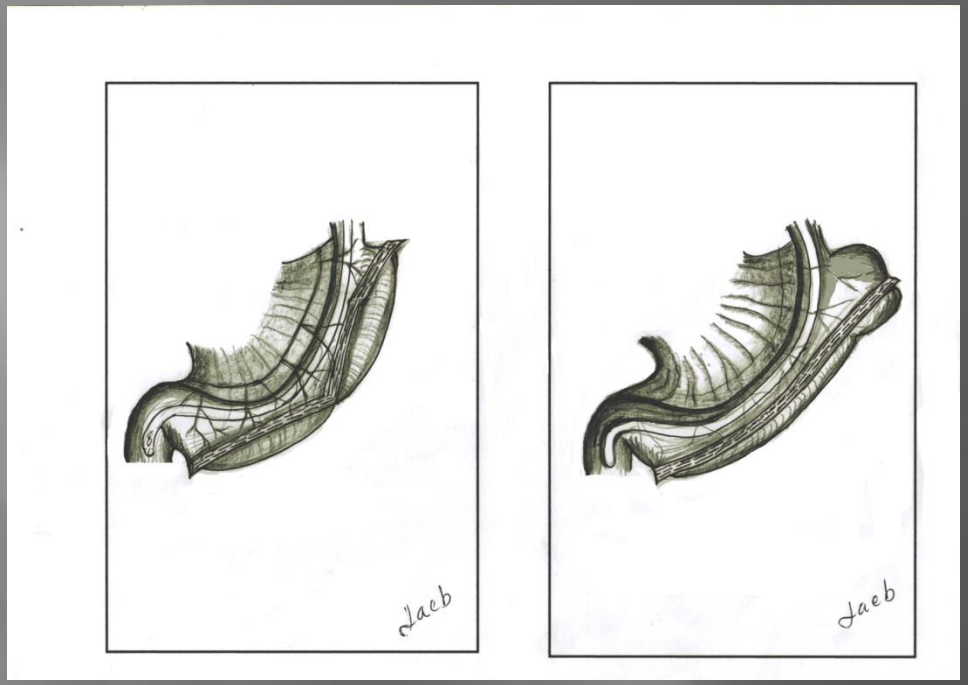
Aspectos técnicos básicos de la GVL

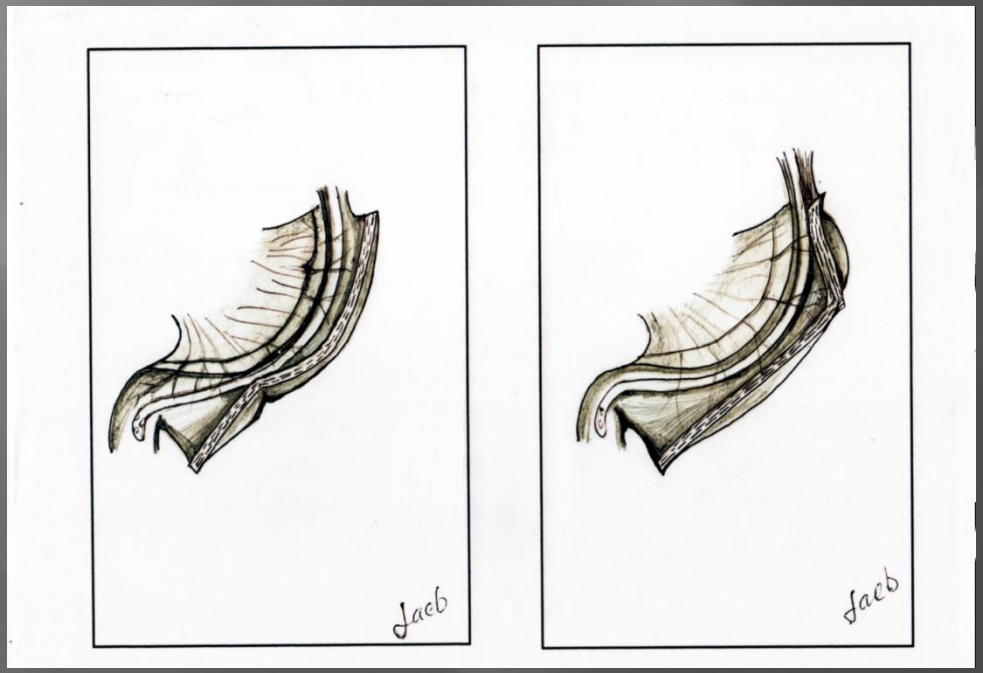
- Devascularización completa de la curvatura mayor gástrica desde píloro a pilar izquierdo del hiato
- Sección de adherencias pancreato-gástricas
- Sonda tutora 36 F, 12 mm.
- Inicio de la sección gástrica cerca del píloro
- Tracción lateral uniforme del estómago en el momento del grapado
- Grapado totalmente paralelo a la curvatura menor
- Último grapado a 1 cm. a la izquierda de la UEG
- Omentoplastia + sutura continua de refuerzo: prevención de sangrado y fugas y "estabilización" del tubo gástrico

PREVENCIÓN Y DIAGNÓSTICO DE FUGAS TRAS GV

- Control intraoperatorio con azul de metileno
- Drenaje siliconado en vecindad de línea de grapas 10 días
- Sonda nasogástrica 24 horas
- Monitorización de Pulso y Sat O2
- Sorbo de Gastrografin en 24 h.
- Azul de metileno diario hasta el 7º dia P.O.
- Retirada del drenaje 7º día PO.




Jacb
Jacb


Jacb
Jacb

Actitud ante una fuga tras GV

Clínica
Azul de Metileno
Gastrografin/TAC

PACIENTE ESTABLE

Rx Intervencionista

PACIENTE INESTABLE

Tratamiento conservador

Cirugía

Fuga pequeña (<1cm.) bien drenada

Fuga grande (>1cm.)/Colección mal drenada/Estenosis

- Sonda naso-yeyunal.
- Antibioterapia
- Ovesco?

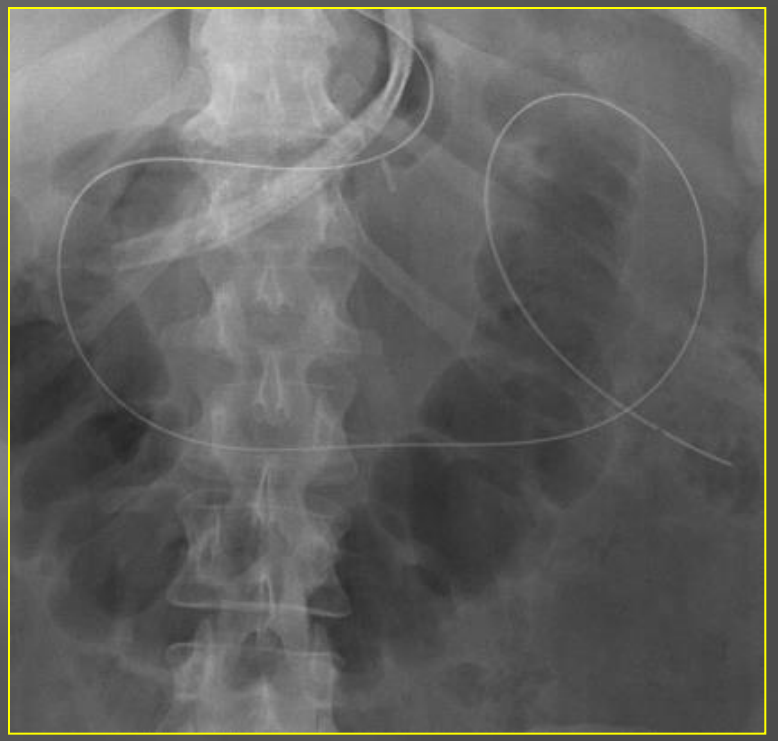
Fracaso

- Drenaje colección RX
- Antibioterapia
- Stent
- Nutrición oral

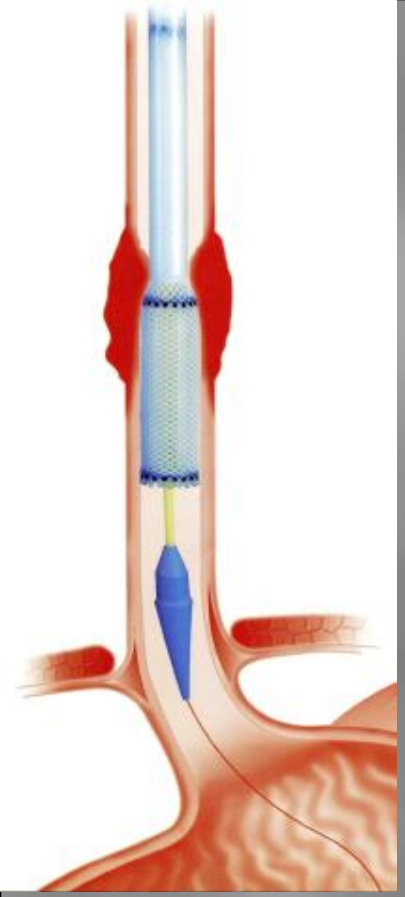
Fracaso

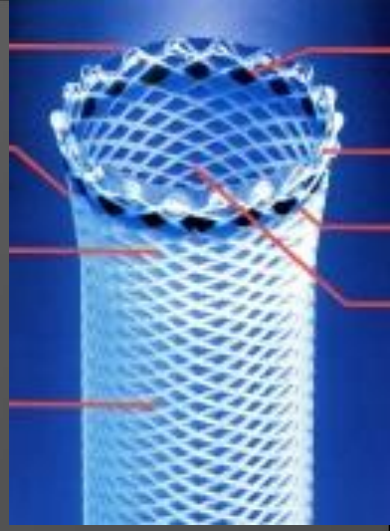
- Drenaje colección.
- Y-Roux

Tratamiento Conservador

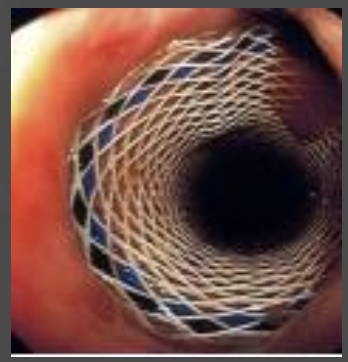


- **Antibioticos.**
- **Drenaje control ECO/TAC.**
- **Sonda de alimentación naso-yeyunal.**
- **NPT: Morbilidad elevada.**
- **Recomendado si débito de la fuga es bajo.**
- **Posible en 60% de pacientes con éxito en 97%**





“Prótesis Cubiertas Autoexpandibles”



P29. Wallstent Prosthesis for Severe leak and Obstruction of the Duodenal Switch Gastric Tube

A. Baltasar, N. Pérez , R. Bou, J. Miró, M. Bengochea, F. Arlandis, C. Escrivá, C. Serra, R. Martínez

Hospital "Virgen de los Lirios", ALCOY, Alicante, Spain

Background: DS (Duodenal switch) is a variation of the BPD (Biliopancreatic derivation). A gastric tube is created in the lesser curvature with several applications of the 75 cm linear stapler and reinforced with a sero-serosa continuous suture of 2/0 Prolene.

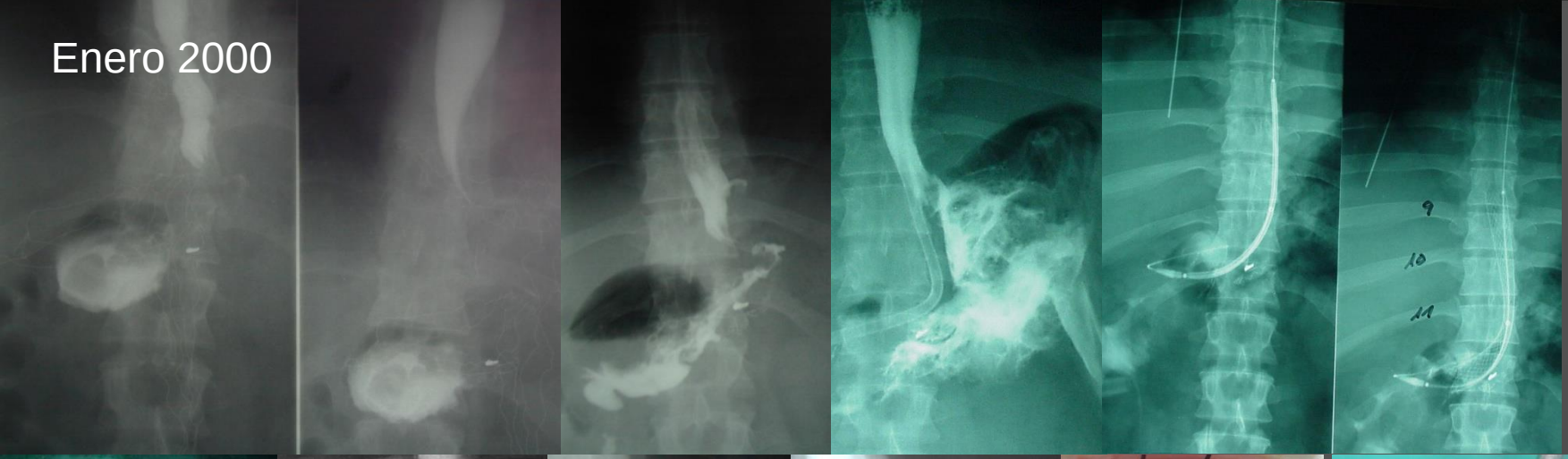
Method and Patient: A 34-year-old male patient had a VBG 11 years ago. He was converted, on Jan 2000, to a DS by removing the band and the greater curvature of the stomach and doing the small bowel 50/50 bypass. He suffered severe obstruction of the gastric tube and a large perforation at the angle of His. Wide drainage of the leak was done, but the leak was impossible to close. A Wallstent self-expanding prosthesis was used to treat the obstruction of the gastric tube. The leak decreased rapidly but he developed stasis at the antrum and poor emptying. The antrum and pylorus had to be removed in a second operation.

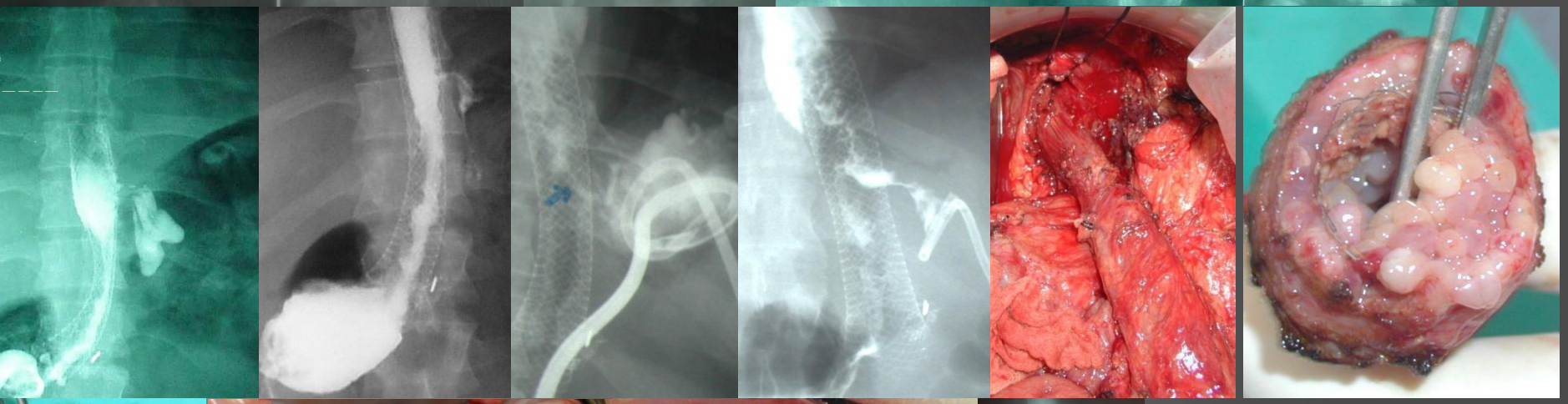
Results: Four months after the original surgery the leak and all his wounds are closed. He eats a regular diet, and has lost 22 Kg. Wallstent, or self-expanding prosthesis, are used frequently to dilate obstructed channels due to malignant conditions. Covered stents are used besides the "uncovered" ones to treat malignant tracheo-esophageal fistulas. The use of stents in a benign condition is rarely reported. No such stents have been reported for such complications of bariatric surgery.

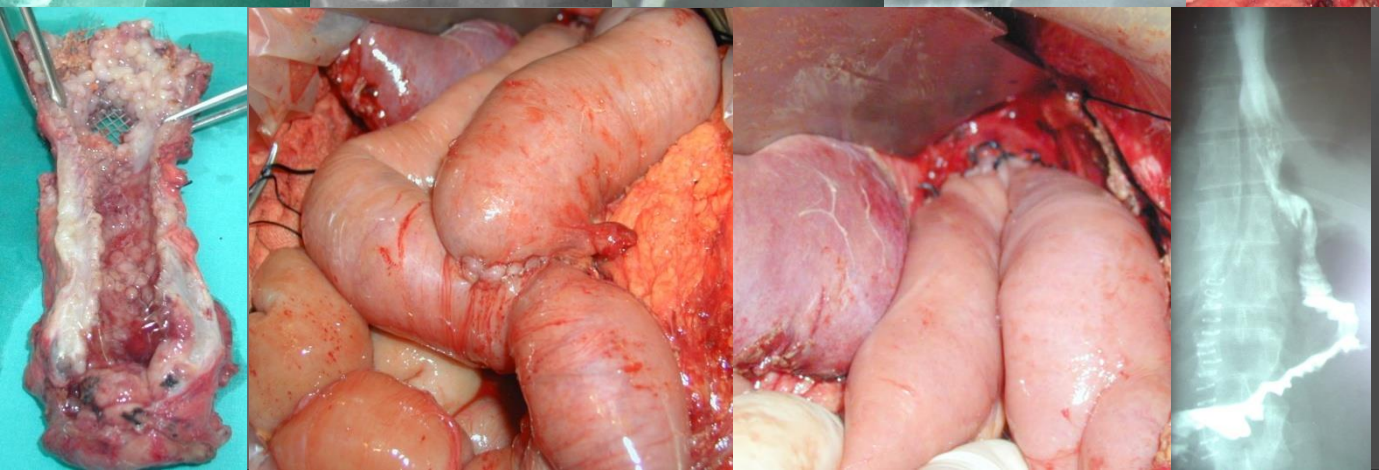
Conclusions: A Wallstent prosthesis to treat obstruction of the DS gastric tube allowed good channel on the stomach and closure of the proximal leak.

Genoa, Santa Marguerita Ligure, Italy 2000

Wallstent prosthesis for severe leak. Obes Surg 2000 10:348





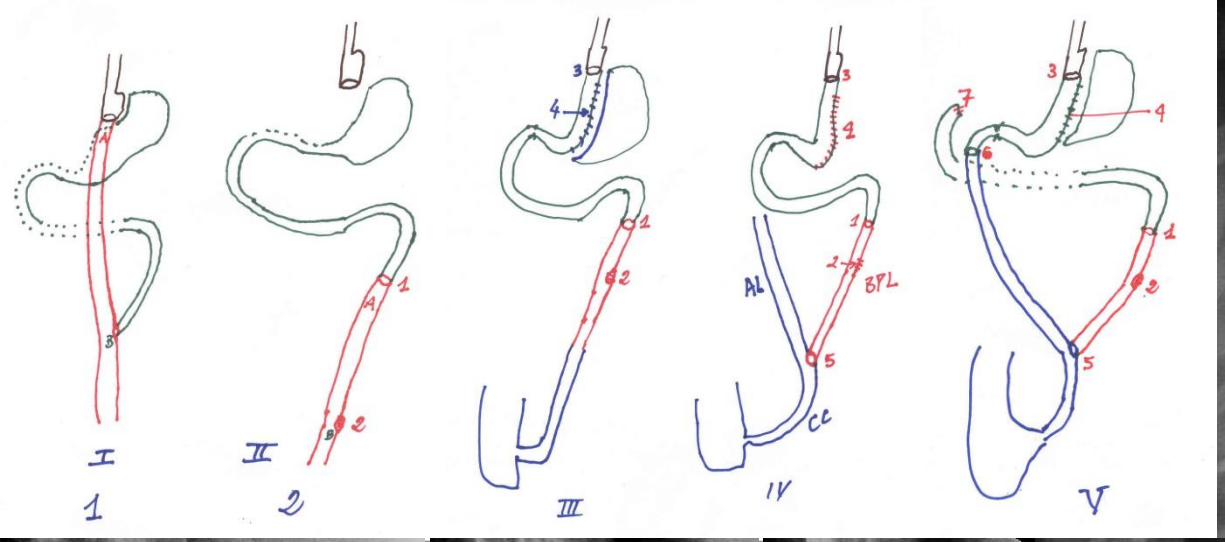


Agosto 2000

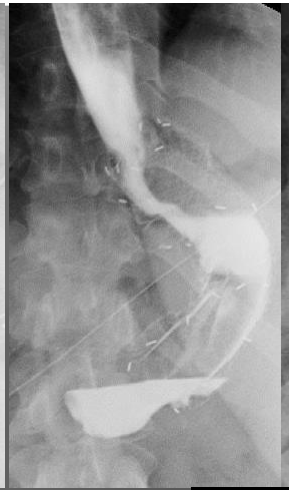
Paciente 1

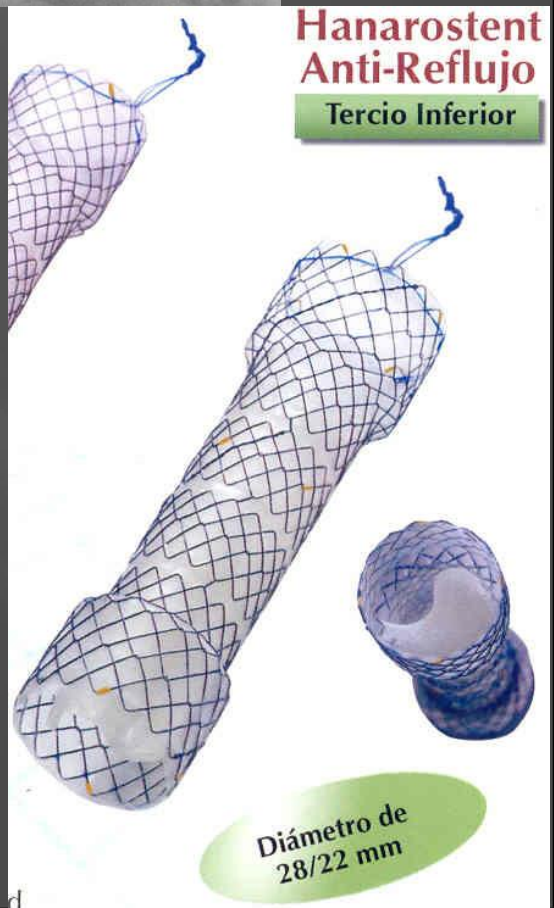
33 a. IMC 35

1987 **GVB →CD**
2000



Marzo 06





Junio 2006

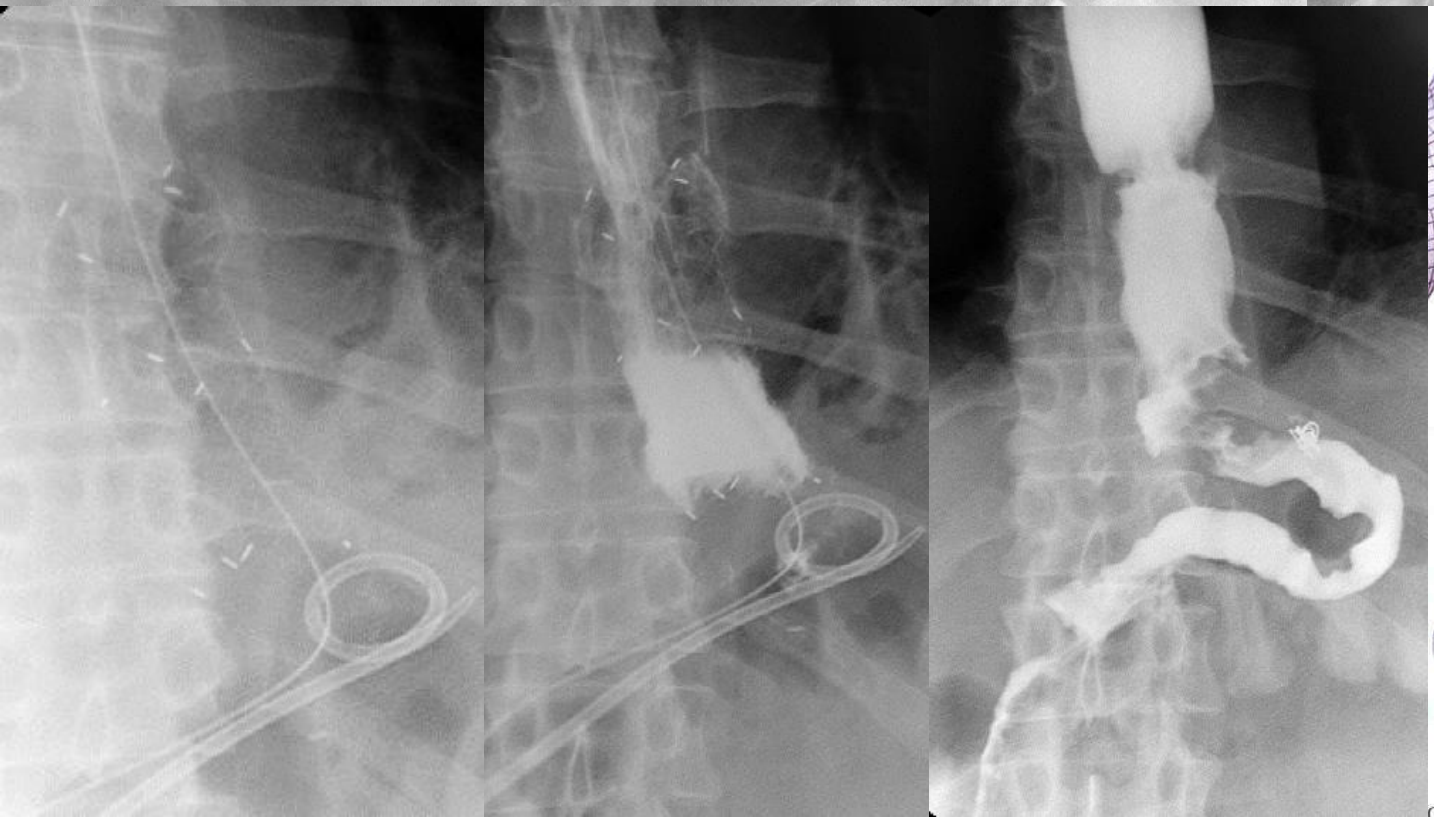
Paciente 2

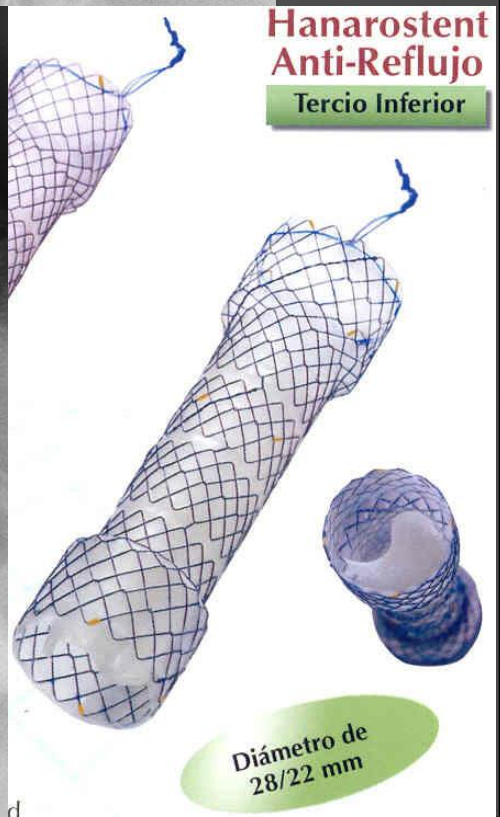
44 a. IMC 51

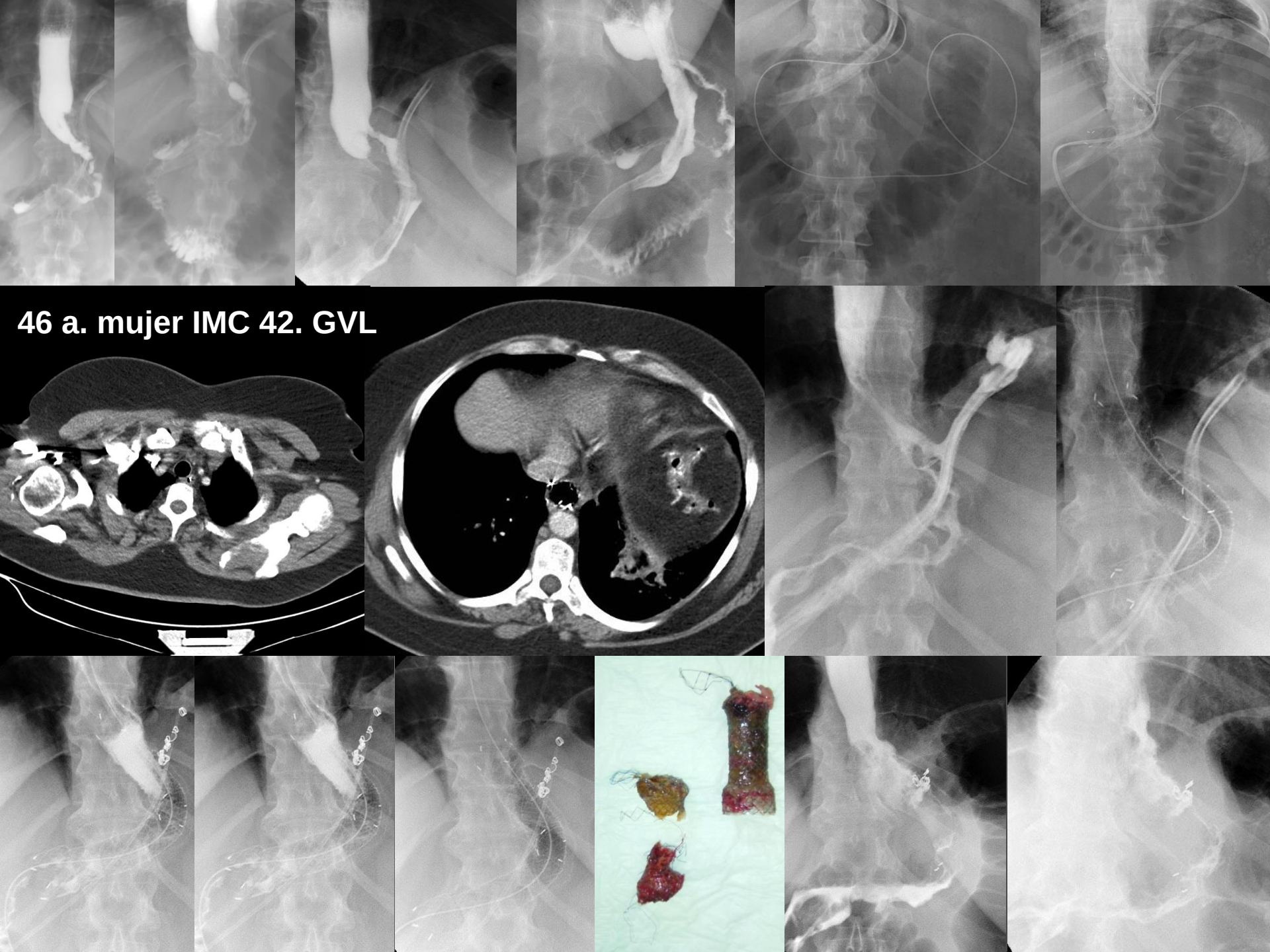
1992 **BPG→CDA**
2006

Septiembre 06

44a varón IMC 41 GVL






46 a. mujer IMC 42. GVL

Obesity Surgery, 17, 866-872 2007

Treatment of Gastric Leaks with Coated Self-Expanding Stents after Sleeve Gastrectomy

Carlos Serra, MD, PhD; Aniceto Baltasar, MD; Luis Andreo, MD[1]; Nieves Pérez, MD; Rafael Bou, MD; Marcelo Bengochea, MD; Juan José Chisbert

General Surgery Service and ogy, Virgen de los Lirios Hospital, Alcoy, Alicante, Spain

6 pacientes

Background: Duodenal switch (DS) is effective techniques for the treatment of bi esity and its co-morbidities, with mortality e <1%, but with 9.4% morbidity rates (6.5% due to leaks). In our experience, leaks of the staple-line after sleeve gastrectomy (SG) are the most frequent sites of fistula formation and conservative treatment usually takes a long time. We present our experience in the treatment of gastric leaks with *coated self-expandable stents* (CSES).

Methods: 6 patients had gastric leaks at the gastro-esophageal (GE) junction after SG or DS. One patient had a symptomatic gastro-bronchial fistula. Stents were

terms of weight loss but also for the management of associated co-morbidities.[1] Laparoscopic sleeve gastrectomy (LSG) and open duodenal switch (ODS) or laparoscopic DS (LDS) are complex bariatric restrictive and malabsorptive techniques that, in our hands, have shown the best results in terms of weight loss, quality of life and resolution of co-morbidities with acceptable complication rates.[2]

Leaks after bariatric operations are usually life-threatening complications, traditionally treated with

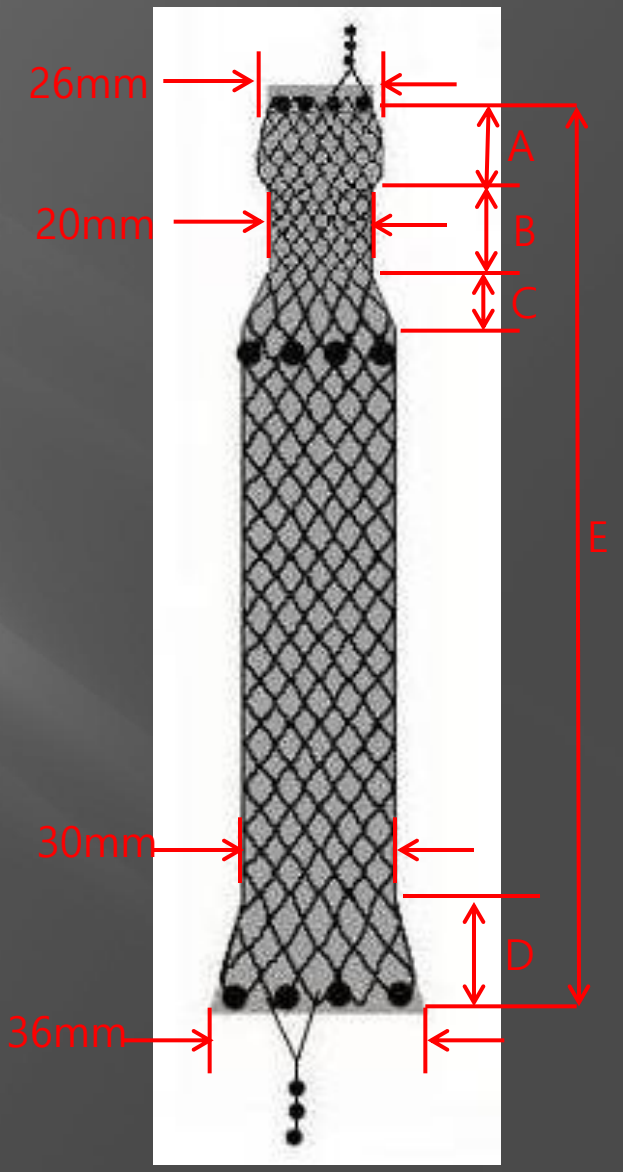
Nuevo stent ECBB 20-30mm

A	Longitud parte proximal	20 mm
B	Longitud cuerpo proximal	40mm
C	Seccion cónica	10mm
D	Longitud cabeza distal	20mm
E	Longitud total	240mm

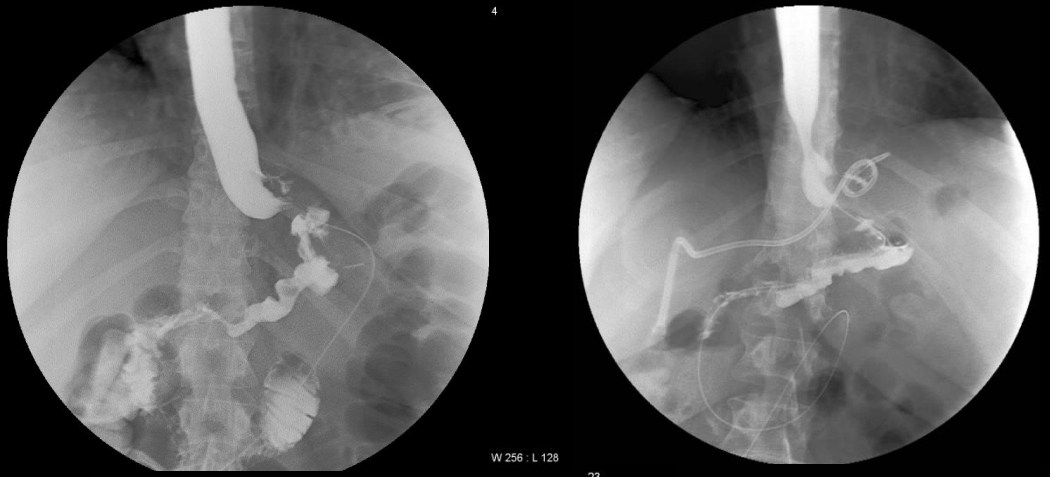
Longitudes totales 150 , 180 y 240 mm

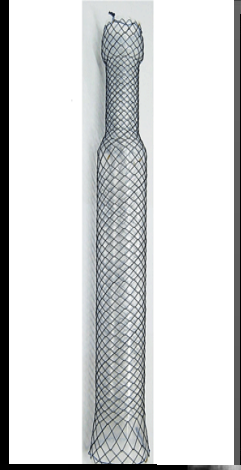
Extremo proximal tipo cóncavo

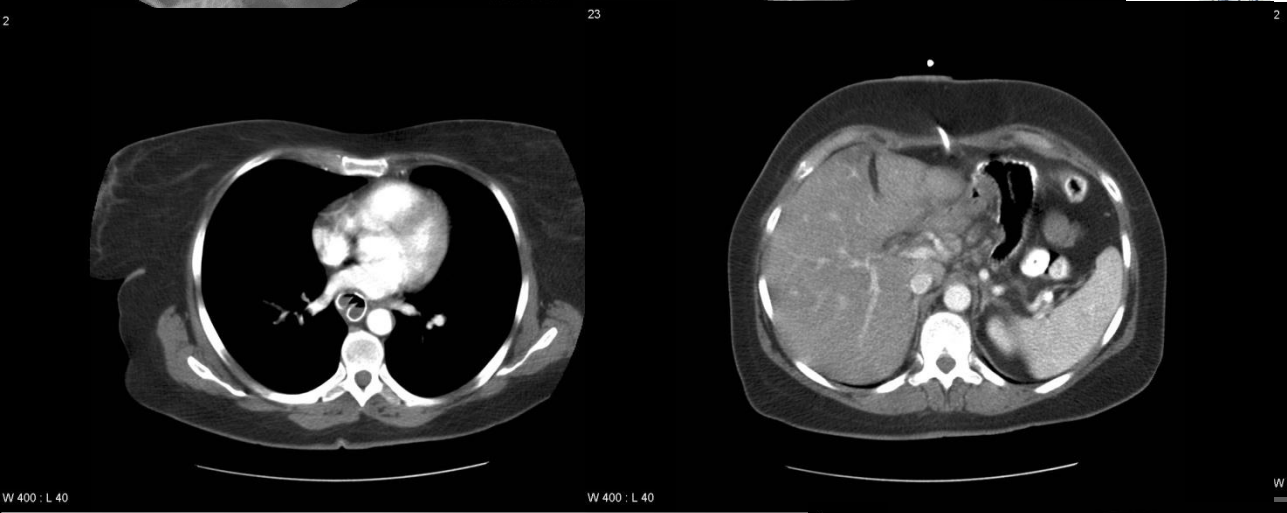
Extremo distal ensanchado



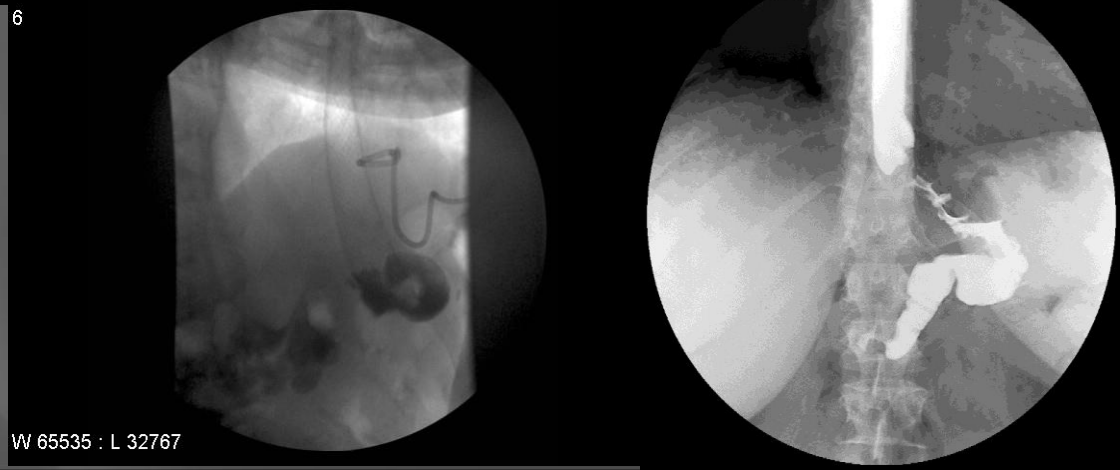
Werfen Group | IZASA hospital

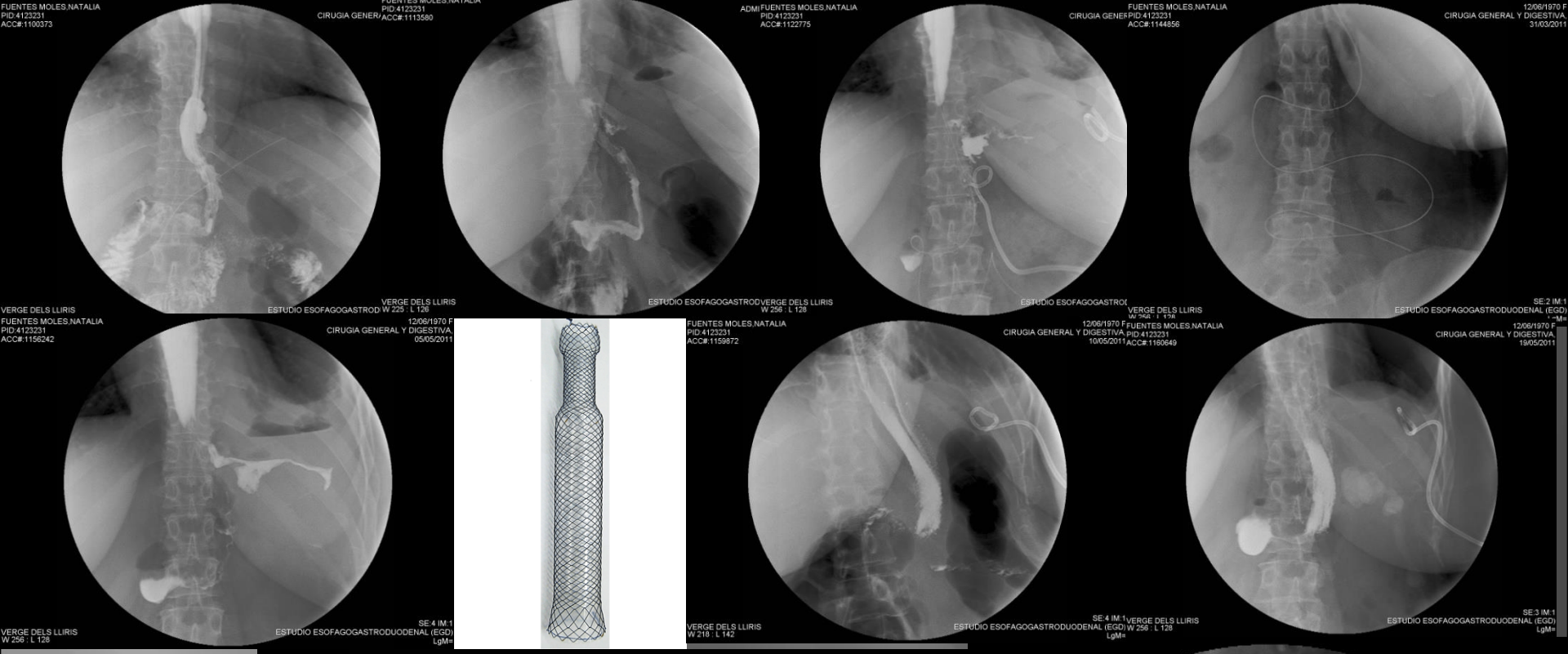




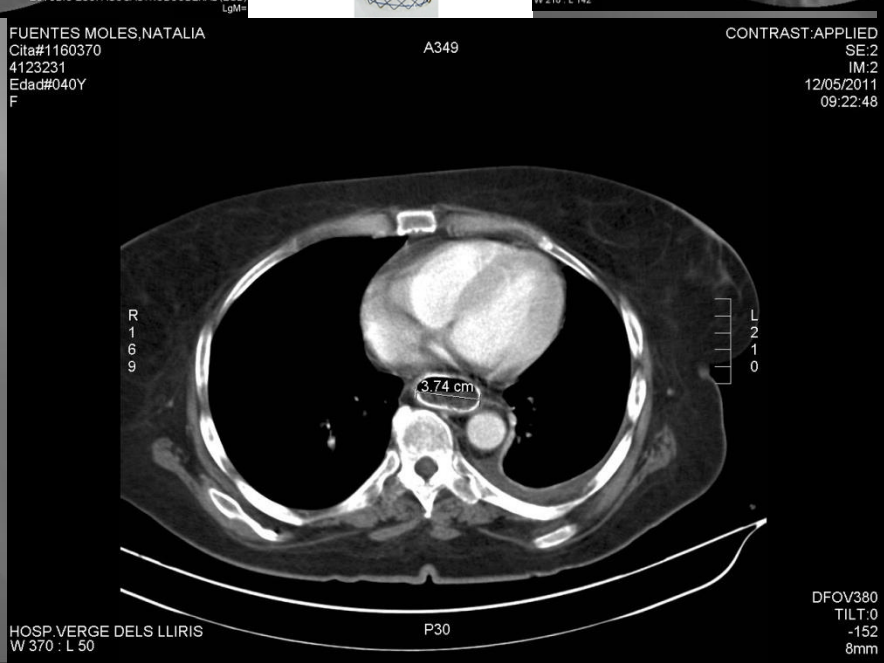


EAR
40 a.
IMC 40





NFM
39 a.
IMC 47



Use of self-expandable stents in the treatment of bariatric surgery leaks: a systematic review and meta-analysis

Srinivas R. Puli, MD,[1] Inbar S. Spofford, MD,[1,2] Christopher C. Thompson, MD, MSc, FACG, FASGE[1]

Boston, Massachusetts, USA

2007

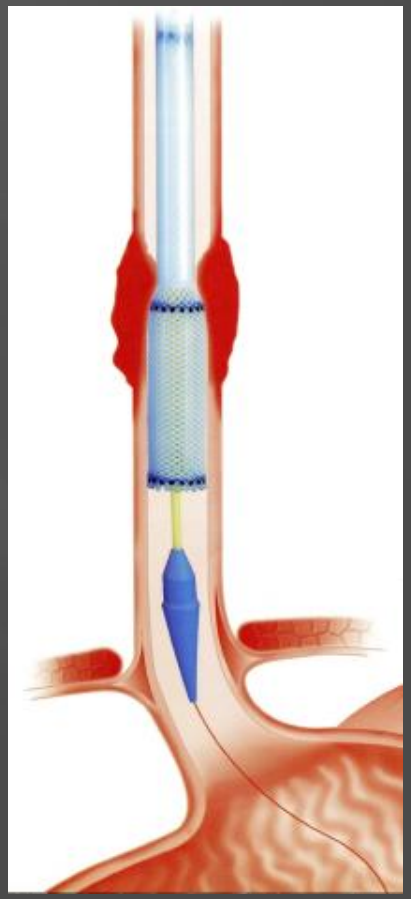
DISEÑO

- 7 estudios de 1120 referencias potenciales
- 67 fugas tratadas con stents cubiertos
- Inserción de prótesis metálica extraíble

RESULTADOS

- ÉXITO (CIERRE): 87.7%
- Éxito retirada: 91,57%
- Migración prótesis: 16.94%
- Cirugía por fracaso de la prótesis: 9%

CONCLUSIONES:
Alternativa eficaz, segura y mínimamente invasiva el tratamiento de las fístulas tras cirugía bariátrica
Prótesis reducen la necesidad de cirugía y mejoran la evolución de los pacientes



OBES SURG
DOI 10.1007/s11695-014-1561-y

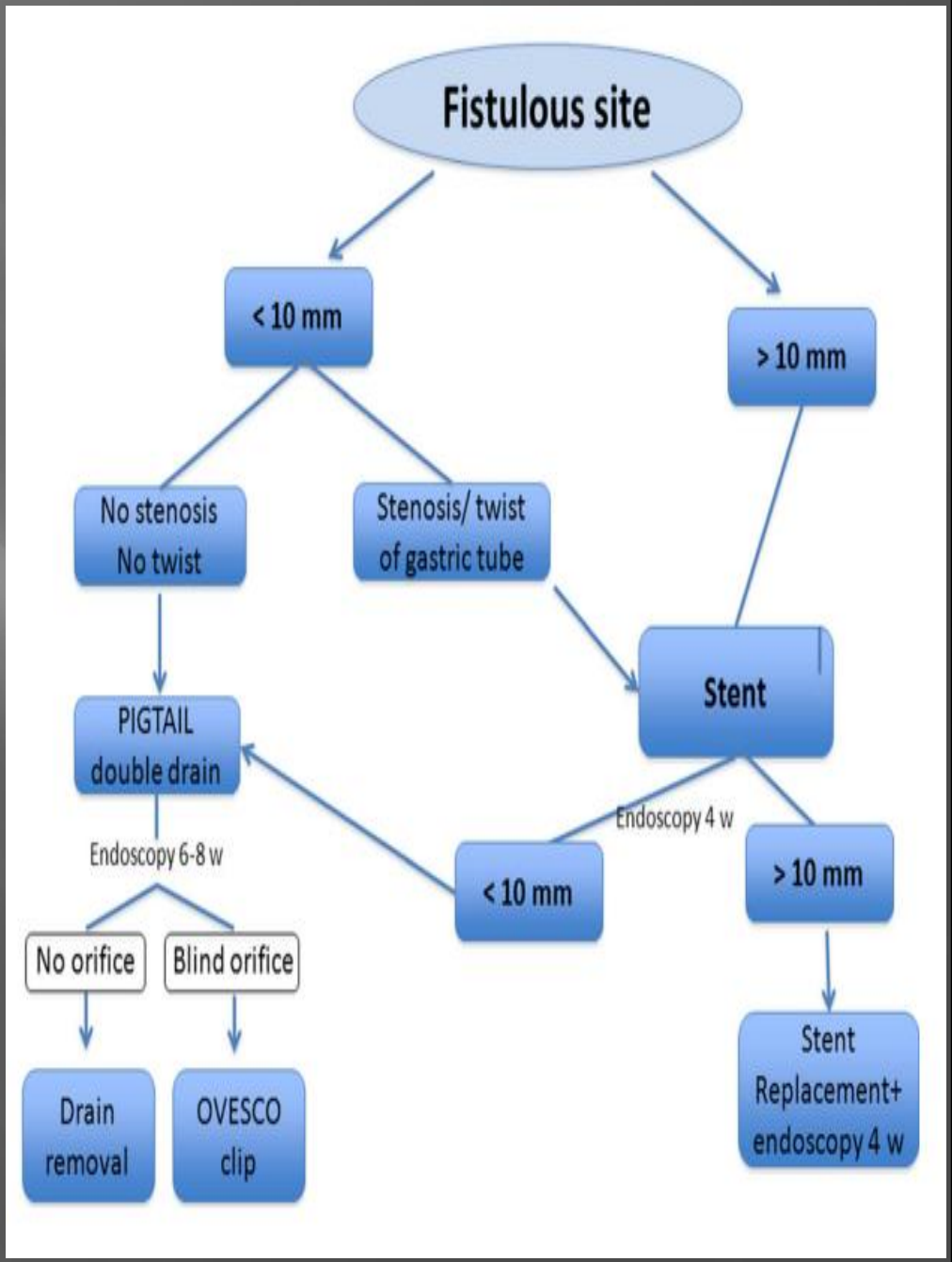
2015

NEW CONCEPT

Outcome of Leaks After Sleeve Gastrectomy Based on a New Algorithm Adressing Leak Size and Gastric Stenosis

Marius Nedelcu · Thierry Manos · Adrian Cotirlet · Patrick Noel · Michel Gagner

- Algorithm of endoscopic treatment depending on the size /presence of stenosis: closure 100% of 19 patients with leaks
- Laparoscopic lavage 1 patient
- Double pig tail drain/ Covered stents (4-6 weeks)/ OVESCO
- Complete healing: 3,4 months (2-14)
- TPN minimum 2 weeks



Obesity Surgery, 17, 1408-1410 2007

Case Report

Use of a Roux Limb to Correct Esophagogastric Junction Fistulas after Sleeve Gastrectomy

Aniceto Baltasar, Rafael Bou, Marcelo Bengochea, Carlos Serra, Luis Cipagauta

The Surgical Service, "Virgen de los Lirios" Hospital, Alcoy, Alicante, Spain

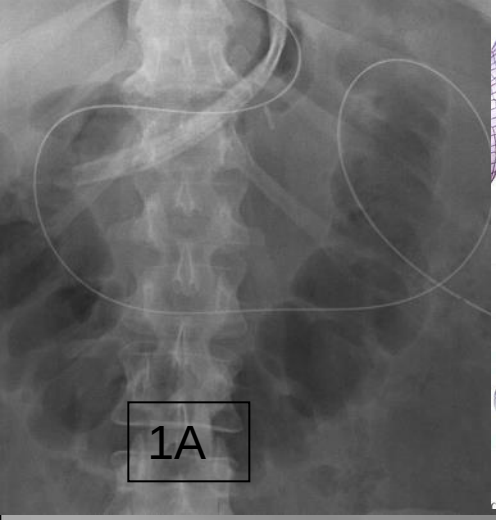
Laparoscopic sleeve gastrectomy (LSG) can be complicated, in the early postoperative course, by an esophagogastric junction (EGJ) leak with very serious consequences. A 48-year-old woman developed an EGJ leak 3 days after LSG surgery and was treated with conservative measures. Finally, 6 weeks after the original surgery, a Roux limb was brought to the EGJ and anastomosed side-to-end to the fistula. At the beginning, the Roux limb was the only functioning outlet and finally, 2 months later, both pathways (the gastric sleeve and the Roux-en-Y) are patent at 3 months after surgery. The Roux limb resolved a dangerous EGJ leak after a LSG.

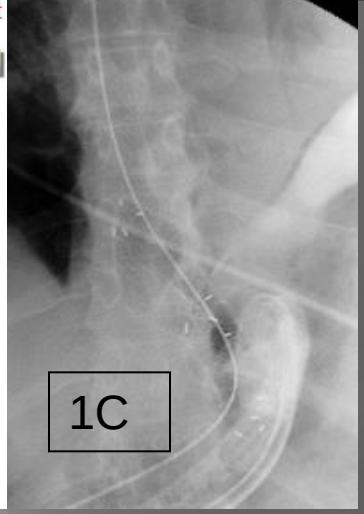
Key words: Morbid obesity, laparoscopic sleeve gastrectomy, esophagogastric leak, Roux-en-Y

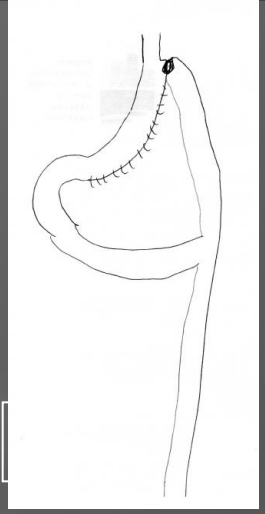
common. Early drainage and appropriate treatment with antibiotics are mandatory. TPN may be used if necessary, but enteral feeding is the preferred nutritional procedure until the leak finally resolves.

Many strategies have been used to try to close the fistula, eg. fibrin sealants by endoscopy,[8,9] microcoils emboli,[10] and self-expandable intraluminal coated stents (CSES).[11-16] Some patients have required a total gastrectomy.[17]

Case Report







1A. Nutrición Enteral

1B. Stent

1C. Stent fuga persistente

1D. Y-Roux LT

Caso 1 48 a Mujer IMC 53 GTL

IMC 25 %EIMCP 97%

1E. Vaciado por Y-Roux

1F. Vaciado por Tubo gástrico

1G. Vaciado por ambas vías

48 a. Varón. IMC 49. CDA Mayo 04. Fuga curada con tto conservador

Diciembre 04

IMC 35

Fistula reabierta. Re-GT Mayo 06.

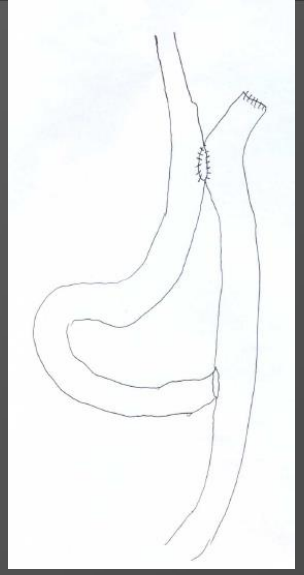
Junio 06

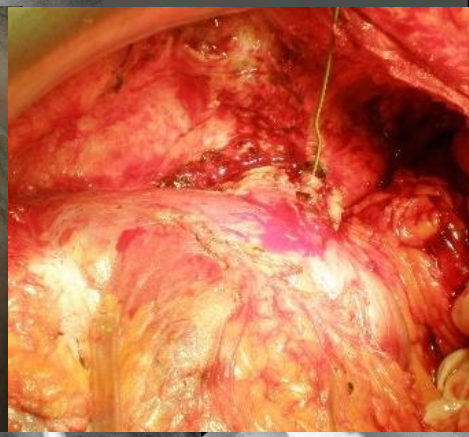
IMC-21

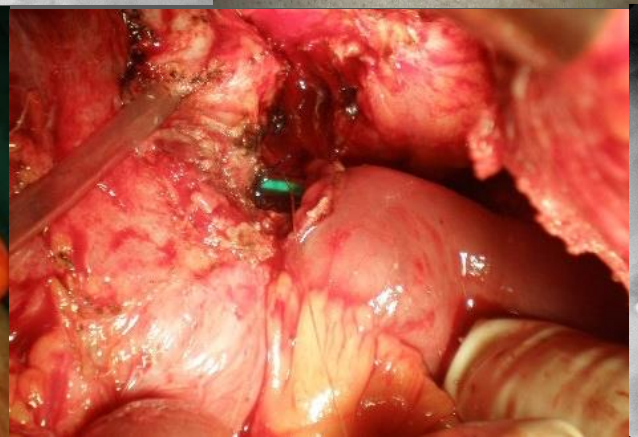
IMC-25

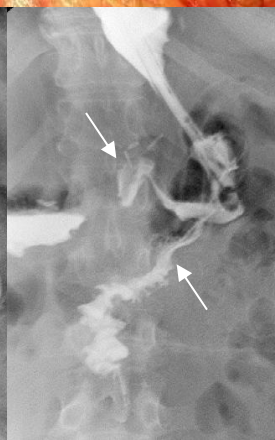
IMC 24 %EIMCP 104%

Nueva fístula en 1/3 medio tubo gástrico









ELSEVIER

Surgery for Obesity and Related Diseases 4 (2008) 759–763

SURGERY FOR OBESITY AND RELATED DISEASES

Case report

Use of Roux limb as remedial surgery for sleeve gastrectomy fistulas

Aniceto Baltasar, M.D.[a], Carlos Serra, M.D.[a], Marcelo Bengochea, M.D.[a], Rafael Bou, M.D.[a], Luis Andreo, M.D.[b]

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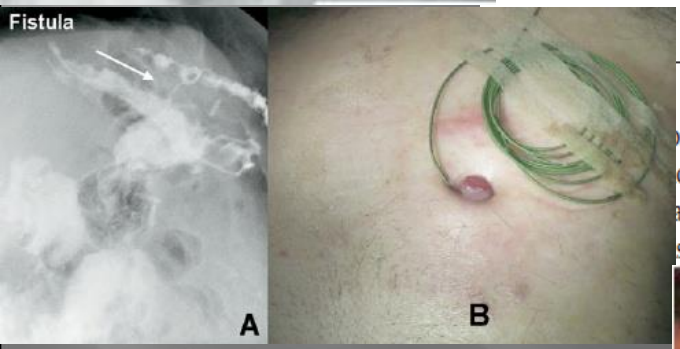
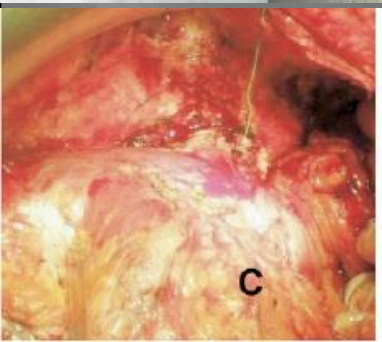
Received December 27, 2007; revised July 17, 2008; accepted July 21, 2008

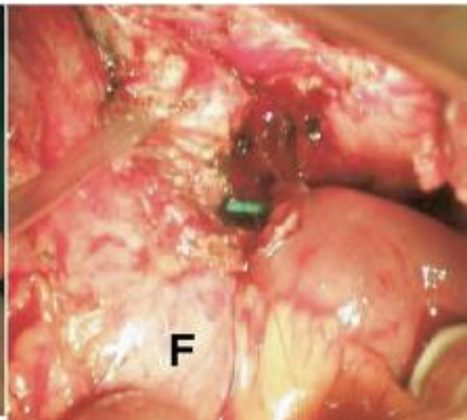
Sleeve gastrectomy; Vertical gastrectomy; Leak; Fistula; Roux-en-Y limb; Restrictive surgery



ic sleeve gastrectomy (LSG) is a restrictive cated as an isolated technique or as the first aroscopic duodenal switch [1–3]. A leak at the stric junction (EGJ), at the uppermost part of

usually with <60 mL. A 19F Blake drain (Ethicon, Somerville, NJ) is positioned along the staple line and left in place for 7 days to test daily with oral methylene blue. A Gastrografin swallow test is done within the first 24 hours





Obesity Surgery, **16**, 1082-1086

Obesity Surgery, 16, 2006

Total Gastrectomy for Complications of the Duodenal Switch, with Reversal

Carlos Serra, MD, PhD; Aniceto Baltasar, MD; Nieves Pérez, MD; Rafael Bou, MD; Marcelo Bengochea, MD

Servicio de Cirugía General, Hospital Virgen de los Lirios, Alcoy, Alicante, Spain

9 pacientes
7 fugas
1 gastroparesia
1 estenosis

Background: Duodena
effective technique
sity and its relate
of <1%, but with
leaks). We presen
ated with a DS, wh
(TG) for complicatio

Methods: From 1994
underwent the DS. 9 patients
were due to gastric leak at th
related to leakage at the doudeno-ileal anastomosis (DIA), 1 was for stenosis of the gastric sleeve, and 1 for a gastroparesis. In 3 cases, the DS was the second bariatric operation. Full restoration of bowel anatomy was attempted in all patients.

Results: TG has been the final solution for gastric complications of the DS in 9 (1%) of our 846 patients. In all cases, bowel anatomy has been restored, and there was no mortality. Postoperative courses have been difficult and hospital stays have been long in all patients (mean 4.5 months; range 1-10 months), with several episodes of re-do surgery after the TG. The actual BMI and %EBMIL are acceptable.

Conclusions: TG successfully treated all 9 cases with life-threatening complications and difficult reinterventions after DS, without mortality. Restoration of bowel anatomy was done in all cases, with good final results.

duction

laparoscopic bariatric surgeries are the
ective treatment for morbidly obese
not only in terms of weight loss but also for
anagement of associated co-morbidities. The evolution of the different techniques has been continuous during the last 15 years, and to date no single operation has been standarized for the management of morbidly obese patients.[1]

Open Duodenal Switch (ODS) or Laparoscopic DS (LDS) is a complex bariatric restrictive and malabsorptive technique that, in our hands, has shown the best results in terms of weight loss, quality-of-life and resolution of co-morbidities, with acceptable complication rates.[2]

Our reported morbidity has been 9.4%, and 1.1% mortality. The incidence of leaks in our series has been 6.5%.[3] The aim of the present study has been to present those patients who required a total gastrectomy (TG) to resolve complications after the DS. Restoration of the full bowel anatomy was also done in all these cases.

Radiología Intervencionista

- Pilar esencial del equipo de Cirugía Bariátrica
- Colaboración con el Endoscopista
- Colocación de sondas de nutrición enteral y parenteral
- Colocación y recolocación de drenajes
- Colocación de prótesis cubiertas expandibles

Tratamiento endoscópico de las fístulas tras GV

- Colaboración con el Rx Intervencionista
- Colocación de sondas para nutrición enteral
- Soporte para colocación de prótesis cubiertas
- Dilatación de estenosis
- Sellado de orificios fistulosos: Tissucol, Glubran, Surgisis.
- Cierre primario: Clips, Endostich, Ovesco
- Eso-SPONGE

SELLADO DE TRAYECTOS FISTULOSOS CON PEGAMENTOS

PEGAMENTOS DE FIBRINA (TISSUCOL, TISSEEL)

- ❑ COMPUESTO BIOLÓGICO
- ❑ ACTUACIÓN LENTA
- ❑ MATRIZ DE FIBRINA:
- ❑ VENTAJAS:
  - Biocomparible
  - NO Necrosis tisular
  - NO Complicaciones tromboembólicas
  - NO Complicaciones septicas
  - NO Daño del endoscopio

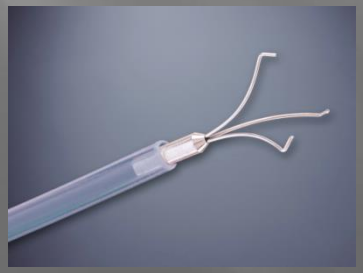
CIANOCRILATOS GLUBRAN)

- COMPUESTO SINTÉTICO
- ACTUACIÓN RÁPIDA
- REACCIÓN LOCAL EOSINOFÍLICA
- INCONVENIENTES:
  - •Reacción sistémica a cuerpo extraño
  - •Necrosis tisular
  - •Complicaciones tromboembólicas
  - •Complicaciones sépticas
  - •Daño del endoscopio

COLOCACIÓN DE ENDOCLIPS POR VÍA ENDOSCÓPICA

Quick clip (Olympus)

Resolution Clip (Boston)

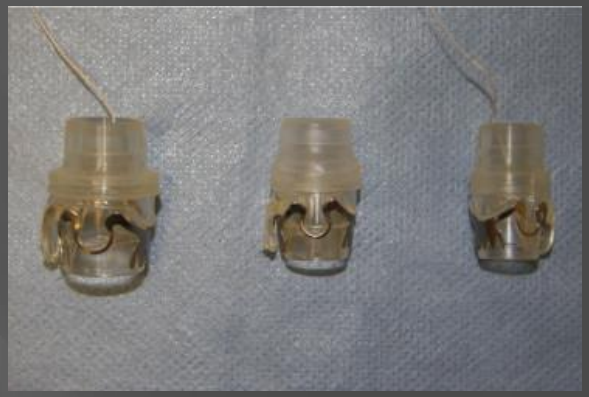


TriClip (Cook)

- Perforaciones agudas inmediatas a su diagnóstico y de pequeño tamaño
- Menor utilidad en fístulas crónicas con tejidos inflamados, indurados y fibrosos.

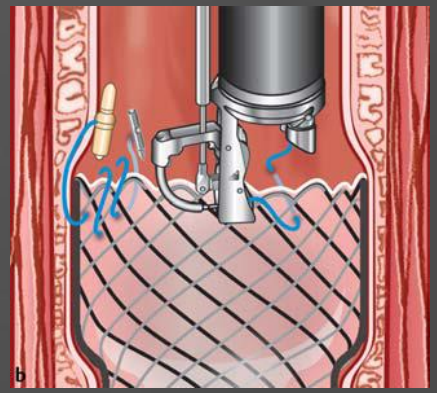
Chuttani R, Barkun A, Carpenter S, et al. Esdoscopic clip application devices. Gastrointest Endosc 2006; 63: 746-50

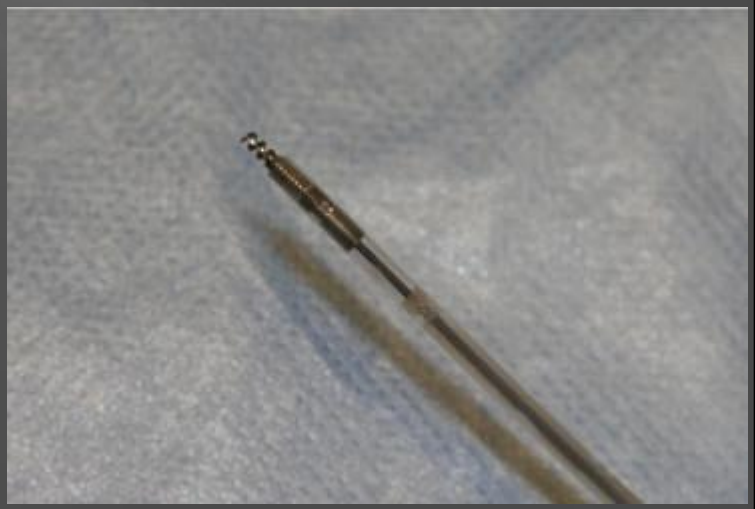

OTSC® System



Overstitch Endoscopic Suturing System Apollo Endosurgery, Austin, Texas

- Sólo compatible con el endoscopio Olympus 2T160
- Suturas continuas o entrecortadas de 2/0 y 3/0
- Fijación de prótesis para evitar migración
- Tto de 6 pacientes con fístulas tras bypass gástrico
  Watson RR et al. Gastrointest Endosc 2011; 73: 653

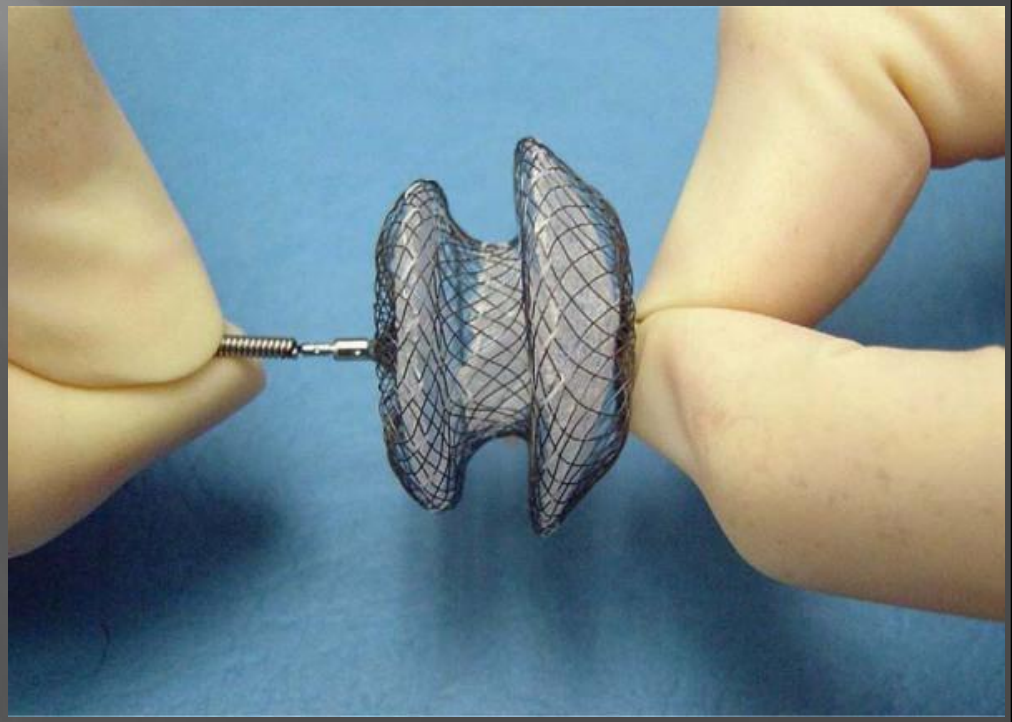




CARDIAC SEPTAL DEFECT OCCLUDERS

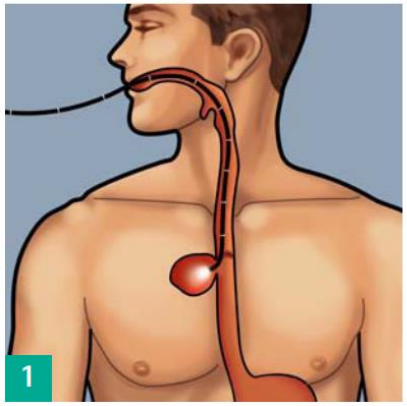
Amplatzer Septal Occluder, AGA Medical group, Minn

Adaptado para su uso en fístulas GI
Dos discos de Nitinol autoexpandibles
Tto de fístulas traqueoesofágicas, traqueogástricas y gastrocolónicas

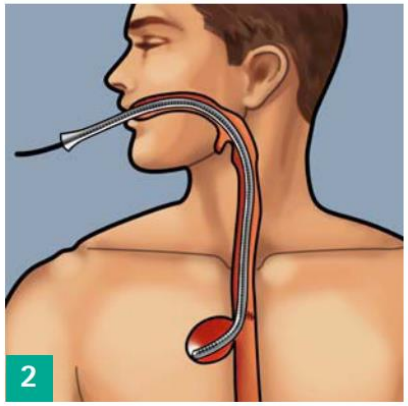


Eso-SPONGE

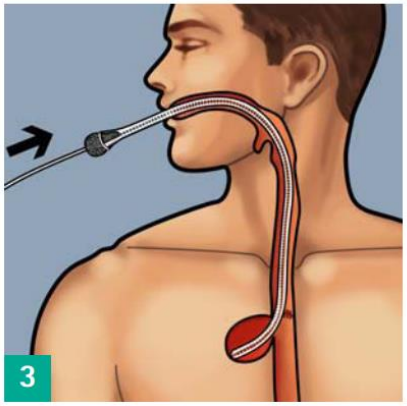
Therapy procedure



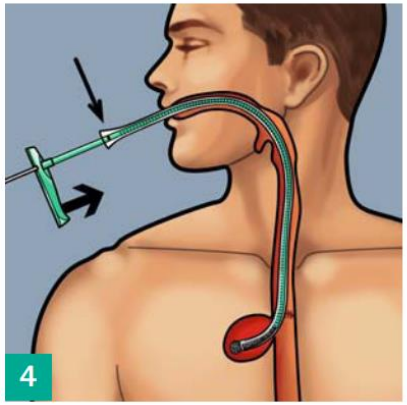
Before use:
Investigate and measure the wound cavity with a flexible endoscope.



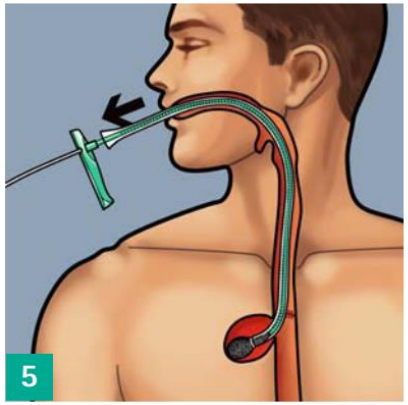
Introduce the overtube under visual control into the insufficiency hole. The endoscope can be used as a guide rail here.



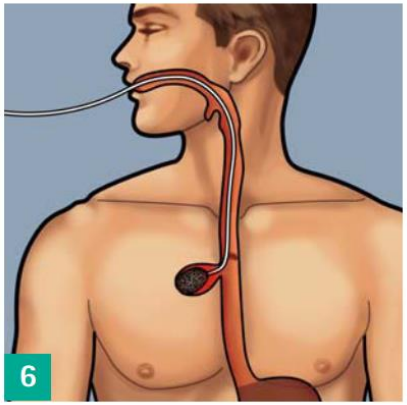
Cover the appropriate, tailored Eso-SPONGE® with sterile hydrogel (glycerol based) and introduce it into the overtube.



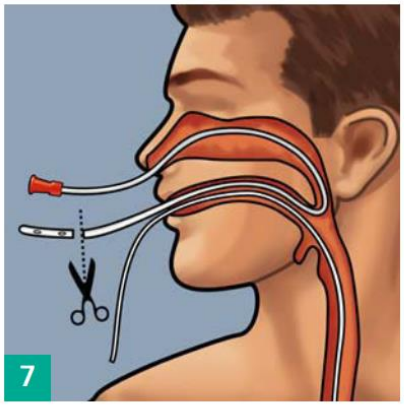
Push the Eso-SPONGE® to the mark with the pusher. The sponge is now at the end of the overtube.



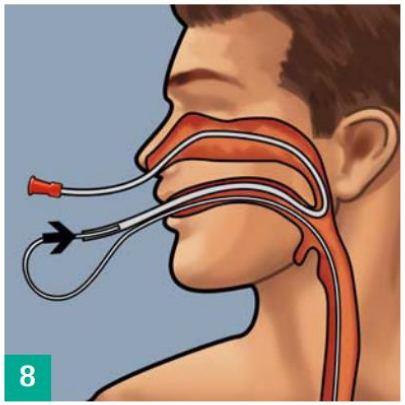
Hold the pusher in place and pull the overtube out as far as the handle of the pusher. The sponge will unfold in the insufficiency hole; the overtube and pusher can be removed together



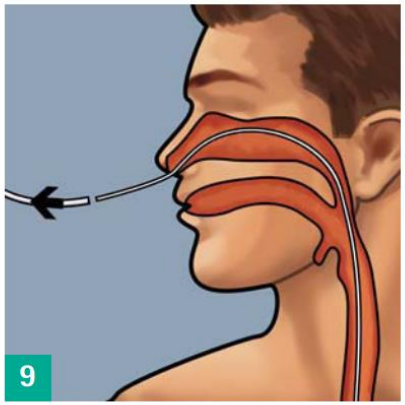
Endoscopic position control of the sponge and appropriate correction by means of endoscopic grasping forceps.



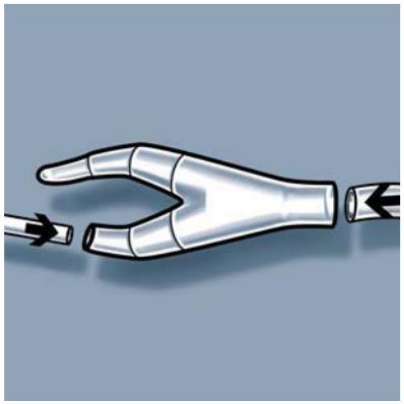
Transnasal channelling:
Insert stomach tube CH 16 (not included in the set) through the nose and bring it out through the mouth. Cut off the atraumatic tip.



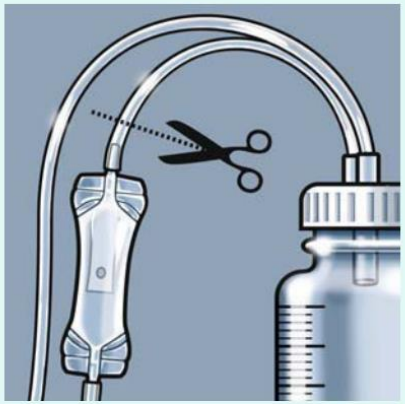
Connect the drain with the stomach tube outside the mouth. Pull the stomach tube together with the drain back through the nose.



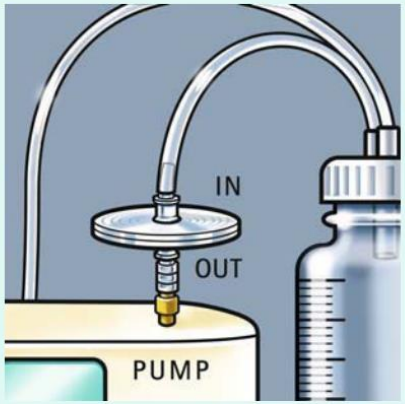
The drain is now transnasally channelled.



Connect the drain by means of the y-piece to the hose of an adjustable, medical pump with sufficient suction performance.* Activate the pump, where necessary keeping endoscopic visual control of the sponge.



When using the MV 1 pump (MTG Germany):
Cut off the secret valve from the secretion cylinder hose.



Connect the filters using a Luer Lock to the pump and attach the cylinder hose to the filter.

Treatment set:

- Overtube (2 sizes available)
- Pusher
- Eso-SPONGE®
- Warning
- Rinsing set
- Y-connecting piece
- Slide clamp

Not included in the set:

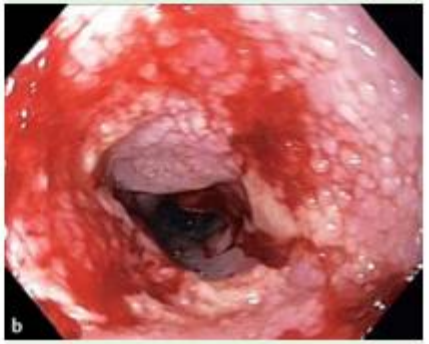
- Sterile hydrogel (glycerol based)
- Gastric tube CH 16
- Adjustable, medical pump for vacuum treatment (product information MV 1 pump see brochure supplements)

Successful treatment of a gastric leak after bariatric surgery using endoluminal vacuum therapy

Fig. 1 Computer tomography (CT) scan in a morbidly obese woman with a leak from the gastric pouch following a Roux-en-Y gastric bypass showing paragastric air and fluid collections (arrows).

Fig. 2 Endoscopic view showing the leak before insertion of the sponge.

Fig. 3 Fluoroscopic image of the polyurethane sponge being inserted.



Lead author / clinic	Number of patients [n]	Method of application*	Suction amount	Average number of sponge changes***	Vacuum therapy success rate % (x/y)
N. Heits, Universitätsklinikum Schleswig-Holstein, Campus Kiel.[1]	10	i.c.	75-200 mmHg	5.4 [2-12]	90 % (9/10)
H. Lenzen, Medizinische Hochschule Hannover.[2]	3	i.c. / i.l.	–	7 [5-12]	100 % (3/3)
B. Schniewind, Universtitäts-klinikum Schleswig-Holstein, Campus Kiel.[3]	17	i.c.	70-80 mmHg	–	–
M. Bludau, Uniklinik Köln.[4]	14	i.c. / i.l.	100 mmHg	3.9 [1-9]	86 % (12/14)
M. Brangewitz, Medizinische Hochschule Hannover.[5]	32	i.c. / i.l.	125 mmHg	7 [5-28]	84.4 % (27/32)
T. Schorsch, Katholisches Marienkrankenhaus Hamburg.[6]	24	i.c. / i.l.	125 mmHg	2 [2-12]	95 % (23/24)
F. Kuehn, Universitätsmedizin Rostock.[7]	9	i.c. / i.l.	125 mmHg	6 [1-13]	89 % (8/9)
G. Loske, Katholisches Marien-krankenhaus, Hamburg.[8]	14	i.c. / i.l.	125 mmHg	4 [1-10]	100 % (13/14)**
R. Weidenhagen, Ludwig-Maximilian-Universität München, Campus Großhadern.[9]	6	i.c.	low vacuum wound drainage system	10 [5-10]	100 % (6/6)
M. Ahrens, Universitätsklinikum Schleswig-Holstein, Campus Kiel.[10]	5	i.c.	70-80 mmHg	9 [8-12]	100 % (5/5)
J. Wedemeyer, Medizinische Hochschule Hannover.[11]	8	i.c.	125 mmHg	7 [5-14]	88 % (7/8)

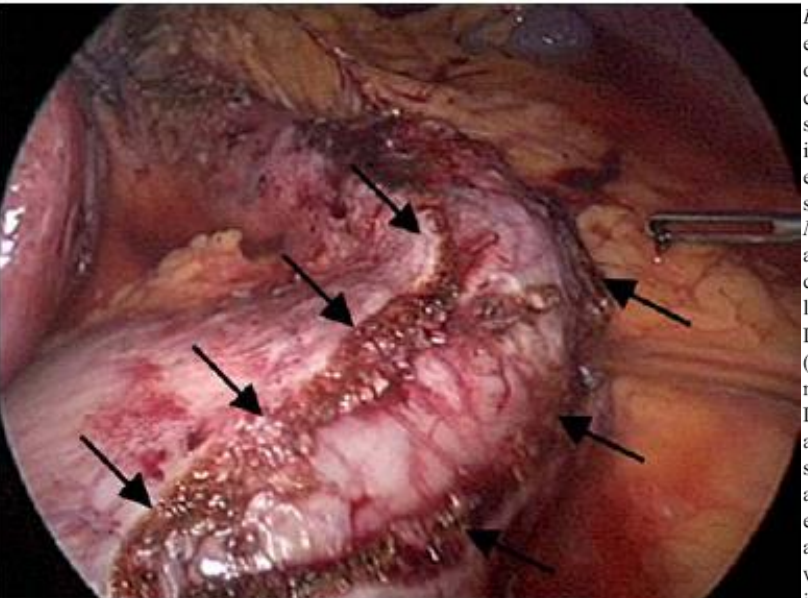
ESTENOSIS GÁSTRICA

ESTENOSIS TRAS GVL

- Incidencia 0,7-4%
- Estenosis funcional: Helix stenosis
- Estenosis mecánica
- No relación con diámetro de sonda
- Localización en incisura angularis
- Relación con sutura invaginante?
- Tratamiento depende de longitud de estenosis: cortas dilatación endoscópica, stents cubiertos, cirugía

ESTENOSIS LARGAS TRAS GVL

9 PACIENTES



OBES SURG (2009) 19:495–499
DOI 10.1007/s11695-009-9803-0

NEW CONCEPTS

Laparoscopic Seromyotomy for Long Stenosis After Sleeve Gastrectomy with or Without Duodenal Switch

Giovanni Dapri · Guy Bernard Cadière · Jacques Himpens

Received: 14 October 2008 / Accepted: 8 January 2009 /Published online: 24 January 2009

Abstract
Background Sleeve gastrectomy (SG) can be performed either as isolated (ISG), or with the malabsorptive procedure of duodenal switch (SG/DS). Among the postoperative complications, stenosis of the SG is relatively rare and only scarcely mentioned in literature. We report our experience in nine patients presenting a long stenosis, not eligible for endoscopic balloon dilation, and treated by laparoscopic seromyotomy after ISG or SG/DS.
Methods From March 2006 to January 2008, four patients after ISG (0.7%) and five patients after SG/DS (0.8%) were consecutively submitted to laparoscopic seromyotomy for long stenosis, not eligible for endoscopic balloon dilation. Dysphagia appeared after a mean time of 9.2±2.6 months (ISG) and of 18.6±13.2 months (SG/DS). Preoperative mean dysphagia frequency was 4±0 (ISG) and 4±0 (SG/DS). Gastroesophageal reflux disease (GERD) symptoms appeared as de novo in two patients of both groups. Barium swallow showed a stenosis at the upper part of the SG (2) and at the level of the incisura angularis (7). Gastroscopy evidenced a mean length of the stricture of 4.7±0.9 cm (ISG) and of 5.2±1.3 cm (SG/DS). The primary outcomes measure was stricture healing rate. Secondary outcomes measures
Results There were no conversions to open surgery and no mortality. There was no peroperative gastric perforation, but one patient was converted into Roux-en-Y gastric bypass (ISG). Mean operative time was 153.7±39.4 min (ISG) and 110±6.1 min (SG/DS). One gastric leak was recorded postoperatively (ISG). Mean hospital stay was 7.6±5.8 days (ISG) and 3.4±0.8 days (SG/DS). Barium swallow check after 1 month was satisfied in all patients, and they were able to tolerate a regular diet. After a mean follow-up of 21±5.6 months (ISG), the mean dysphagia score was reduced to 0.6±0.9, and after a mean follow-up of 17.6±10.5 months (SG/DS) to 0.8±0.8. De novo GERD symptoms improved in two patients of both groups.
Conclusion Laparoscopic seromyotomy after SG for long stenosis is feasible, and efficient for the treatment of symptomatic dysphagia. It has a beneficiary influence on de novo GERD symptoms improvement. There is, however, the risk of postoperative leak.

Keywords Stenosis · Myotomy · Sleeve gastrectomy · Duodenal switch · Endoscopic dilation

DILATACIÓN/REGANANCIA DE PESO

DILATACIÓN TRAS GVL

- Asociada a fracaso en la pérdida de peso
- Resección incompleta del fundus
- Estenosis distal a UEG

RE-GASTRECTOMÍA VERTICAL

Obesity Surgery, 13, 649-654

Case Report 2003

Laparoscopic Reoperative Sleeve Gastrectomy for Poor Weight Loss after Biliopancreatic Diversion with Duodenal Switch

Michel Gagner, MD, FRCSC, FACS; Tomasz Rogula, MD, PhD

Minimally Invasive Surgery Center, Mount Sinai School of Medicine, New York, NY, USA

Background: The revisional surgery for patients with inadequate weight loss after biliopancreatic diversion with duodenal switch (BPD/DS) is controversial. It has not yet been determined whether a common channel should be shortened or gastric pouch volume reduced. Since the revision of the distal anastomosis remains technically difficult and associated with possible complications, we turned our attention to the reduction of gastric sleeve volume. This operation is more feasible and potential complications are less probable.

Patient and Method: We present the case of a 47-year-old women with a life-long history of morbid obesity. She was operated on in January 2000 with a laparoscopic BPD/DS with 100 ml gastric pouch, 150 cm of alimentary limb and 100 cm of common channel. Before this operation, her weight was 170 kg, with BMI 64 kg/m². She lost most of her excess weight within 17 months after surgery and was regaining weight at 77 kg and BMI 29 kg/m². Upper GI series showed a markedly dilated gastric pouch. Her second surgery consisted of a laparoscopic sleeve partial gastrectomy along the greater curvature using endo GIA staplers with bovine pericardium for reinforcement of the stapler line.

Results: No postoperative complications occurred. The patient was discharged on the first postoperative day. Significant further weight reduction was noted, and at 10 months after surgery, her weight is 61 kg with BMI 22.

Conclusion: A repeat laparoscopic gastric sleeve resection was performed for inadequate weight loss after BPD/DS, and resulted in further weight reduction.

Reprint requests to: Michel Gagner, MD, Division of Laparoscopic Surgery, Mount Sinai School of Medicine, 5 East 98 Street, Box 1103, New York, NY 10029-6574, USA. Fax. 1-212-410-0111; e-mail: michel.gagner@mountsinai.org

Key words: Duodenal switch, sleeve gastrectomy, morbid obesity, bariatric surgery, laparoscopic reoperative surgery

Introduction

Obesity in the United States has become an increasing problem with medical, social and economic consequences.[1,2] Medical and behavioral therapy is not effective in achieving desirable weight on long-term follow-up in morbidly obese patients. Bariatric surgery has evolved over the past 25 years into an effective and safe treatment for severely obese patients. A significant number of patients who undergo such treatment require revisional surgery, both because of complications and because of unsatisfactory weight loss.

Biliopancreatic diversion (BPD), described by Scopinaro in 1979, remains one of the most effective procedures for treatment of morbidly obese patients, especially those with body mass index (BMI) >50 kg/m². Satisfactory weight loss is achieved with an acceptably low rate of long-term nutritional complications.[3] Further modifications, mainly sleeve gastrectomy and duodenal switch (BPD/DS), significantly diminish the more severe complications of BPD: dumping syndrome-related problems, ulcerogenicity, hypoproteinemia and hypocalcemia. The antrum, pylorus, first part of the duodenum and lesser curvature of the stomach as well as vagal nerve integrity are spared, allowing

Obesity Surgery, 16, 1535-1538

Modern Surgery

Re-Sleeve Gastrectomy

Aniceto Baltasar; Carlos Serra; Nieves Pérez; Rafael Bou; Marcelo Bengochea

The Surgical Service, "Virgen de los Lirios" Hospital, Alcoy, Alicante, Spain

Background: Laparoscopic sleeve gastrectomy (LSG) started as the restrictive part of the more complex laparoscopic duodenal switch (LDS) operation. There is no long-term experience with the isolated LSG. The main concern about the isolated LSG is the possibility of dilatation of the gastric pouch, long-term loss of restrictive function and weight regain. Laparoscopic re-sleeve gastrectomy (LRSG) has been used sparingly, but it also may become a possibility if more patients have the isolated LSG.

Methods: 2 patients with BMI 58 and 65 respectively, underwent LSG as the first stage of the LDS. Later, when the patients regained some weight and their gastric pouch was found to be too large, the LRSG/DS was done.

Results: The patient with BMI 58 had an initial drop to BMI 34 and regained weight to BMI 46, but after the LRSG/DS her BMI is 36 at 4 months. The BMI patient with BMI 65 had a drop to BMI 42, and after the LRSG/DS his BMI is 33 at 3 months later.

Conclusion: LRSG may become necessary after gastric tube dilatation or insufficient original gastric volume reduction. LRSG is feasible, available and easy to perform when the resulting gastric pouch is too large or dilates after the original LSG.

Key words: Morbid obesity, obesity surgery, laparoscopy, sleeve gastrectomy, re-operation, duodenal switch

the more complex laparoscopic duodenal switch (LDS) operation, and became a reality where the laparoscopic approach to the super-super-obese was found to be a too complex operation.[1-3]

There is no long-term experience with the LSG. The main concern about the isolated LSG is the possibility of dilatation of the gastric pouch, long-term loss of the restrictive function and weight regain. LSG has proved to be a more effective operation in the super-obese patients than the gastric balloon.[4]

Duodenal switch (DS) is our mainstay bariatric operation since 1994 (545 open cases), and now is done routinely laparoscopically (LDS) hand-sewn since 2000 (304 cases). LSG has been performed since 2003 (72 patients).[5-7]

LSG is purely restrictive and our indications are: 1) super-obese patients (BMI>55) as a first stage for the LDS; 2) patients with BMI >40 with severe medical disease (cirrhosis, AIDS, Crohn's); 3) low BMI patients (35-43) with a major co-morbidity; 4) patients with lap-band removal; and 5) the morbidly obese adolescent.[5]

Laparoscopic re-sleeve gastrectomy (LRSG) is possible if the stomach dilates or if the original LSG left a higher volume stomach than desirable.

Obesity Surgery, 9, 546–549

Case Report

Internal Hernias and Gastric Perforation After a Laparoscopic Gastric Bypass

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A 27-year-old woman underwent laparoscopic Roux-en-Y gastric bypass. A retrocolic-retrogastric herniation of most of the small bowel and later a gastric perforation due to internal hernia at the mesenteric defect of the jejuno-jejunostomy occurred. These unusual, but not rare, complications are directly related to the neoanatomy that follows gastric bypass and can lead to rapidly progressing and life-threatening situations. Proper evaluation of clinical signs and

Laparoscopic Roux-en-Y gastric bypass (LRYGBP) was first reported by Wittgrove and Clark in 1994,[1] and their experience with a significant number of patients has shown excellent results compared with the open technique.[3,4] In addition, LRYGBP achieves superior cosmetic results, less morbidity, less recovery time and hospital stay, and reasonable operating times, but represents an ad-

CIRUGÍA ESPAÑOLA. Vol. 66, Noviembre 1999, Número 5

Taponamiento cardíaco provocado por perforación cardíaca por un catéter venoso central

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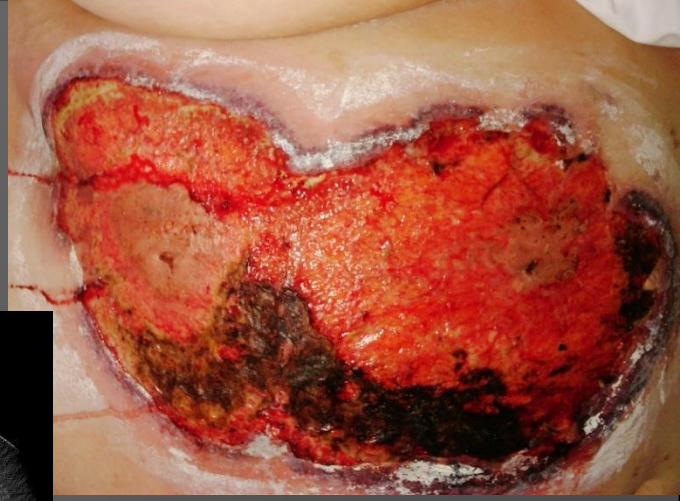
Fístula pancreatocutánea secundaria a pancreatitis postoperatoria tras cruce duodenal laparoscópico

José Bueno, Nieves Pérez, Carlos Serra, Rafael Bou, Javier Miró y Aniceto Baltasar






BMI
BARIÁTRICA & METABÓLICA IBERO-AMERICANA

Baltasar. Malnutrition. BMI –2011; 1.2.5 (96-97)

June 2011

Three types of bowel lengthening for Protein-Caloric Malnutrition. Video

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Received 2011.04.03, Accepted 2011.05.17

Background: Protein-Caloric Malnutrition (PCM) is the most severe long-term complication of the complex restrictive plus mal absorptive operations for morbid obesity such as Bilio-Pancreatic Diversion (**BPD**), BPD-Larrad, Duodenal Switch (BPD/DS) and the Distal Gastric Bypass (DGBP) where both components are important [1].

Preventive measures are the correct measures of the bowel lengths and proportion where the Common Channel (**CC**) should be 10% of the whole bowel, the Alimentary Limb (**AL**) a 40% and the Bilio-Pancreatic Limb (**BPL**) 50% [2]. The PCM is extremely rare after simpler restrictive operations. The basic cause of the PCM is too much restriction combined with to severe mal absorption [2].

Fig 1A. Full several. Type I Fig 1.B. Type II Fig 1C Type III

3) Type III. Bowel lengthening the CC by moving the AC > 100 cm proximally on the BPL over the previous RNY (Fig. 1.C)

ELSEVIER

Surgery for Obesity and Related Diseases 6 (2010) 572–574

SURGERY FOR OBESITY AND RELATED DISEASES

Case report

Fatal perforations in laparoscopic bowel lengthening operations for malnutrition

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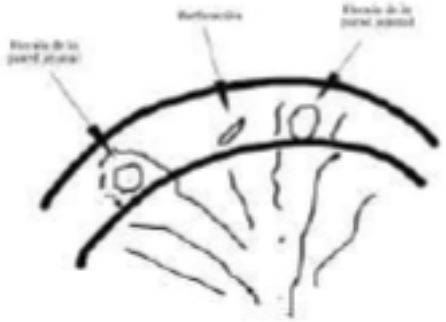
Received December 8, 2009; revised December 11, 2009; accepted December 15, 2009



2004

Obesity Surgery, 14, 77-83

Clinical Hepatic Impairment after the Duodenal Switch

10 pacientes
2 fracaso hepático

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2014

Elsevier Editorial System(tm) for Surgery for Obesity and Related Diseases
Manuscript Draft

Manuscript Number: SOARD-14-79R1

Title: Liver failure and transplantation after Duode

Liver failure and transplantation after duodenal switch

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Fig. 5. A) Paciente pre-op (vestida) B) Trasplantada

Abstract

Liver failure (**LF**) and liver transplant (**LT**) are very rare after a Bilio-Pancreatic Diversion/Duodenal Switch (**DS**) procedure for obesity but occasionally it may occur. Two clinical cases are presented. In one patient, who had the DS

BMI

Baltasar A. BMI 2013; 31:3 (4-7) Junio 2013 04

Intubación Difícil y Traqueotomía en el obeso mórbido

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Emergency Tracheotomy in Morbid Obesity

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16 Oct 2017