TOUPET-SLEEVE, AN OPTION IN CASE OF PREOPERATIVE GERD

HAUTERS PHILIPPE

CH WAPI – TOURNAI

BELGIUM

In accordance with «EACCME criteria for the Accreditation of Live Educational Events»

I have no potential conflict of interest to report

Case mix disclosure in % of procedures

Procedure	%
RYGBP	48%
Sleeve	34%
T-Sleeve	1%
Revisional	14%
SASI-S	3%

OUR TEAM SURGICAL STRATEGY

- IN BARIATRIC PATIENTS WITH PREOPERATIVE GERD
  - RYGBP IS OUR GOLD-STANDARD PROCEDURE
    - IN PATIENTS RELUCTANT TO HAVE A RYGBP
      - WE PROPOSE A SLEEVE-FUNDOPLICATION AND OUR OPTION IS TOUPET-SLEEVE
        - WHY TOUPET-SLEEVE ?
          - BETTER CONTROL OF GERD THAT WITH AN ANTERIOR WRAP
          - LESS SIDE-EFFECT (MAINLY DYSPHAGIA) THAN WITH A NISSEN WRAP
          - LEAVE IN PLACE A SMALLER FUNDUS WITH POTENTIAL BENEFIT ON WEIGHT LOSS
- IN PATIENTS WITHOUT PREOPERATIVE GERD
  - TOUPET-SLEEVE IS NOT AN ALTERNATIVE TO CONVENTIONAL SLEEVE

TOUPET-SLEEVE: STUDY GROUP

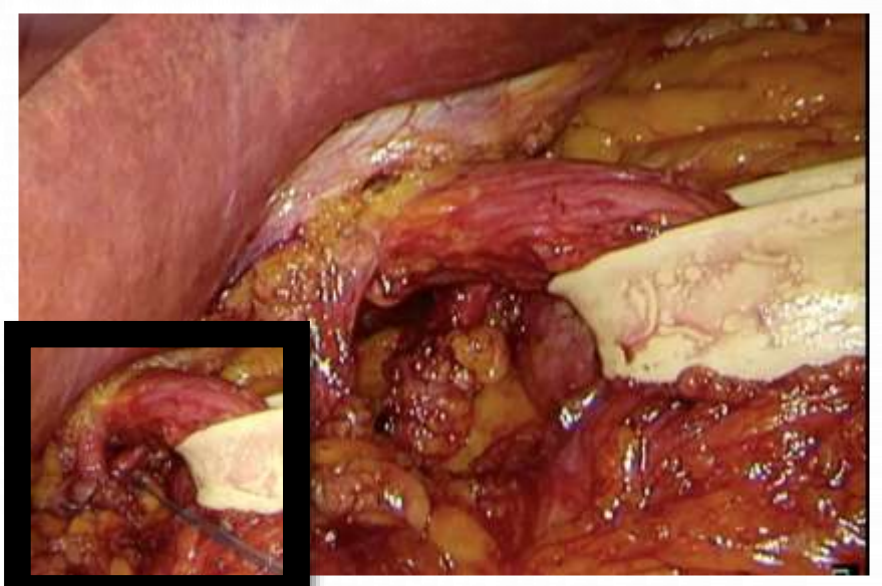
- 19 CONSECUTIVE PATIENTS
  - OPERATED BETWEEN OCTOBER 2017 AND FEBRUARY 2019
- GERD SYMPTOMS CONTROLLED BY PPI TREATMENT
  - ESOPHAGITIS AT ENDOSCOPY
- REFUSED THE OPTION OF A RYGBP

No patient was lost for follow-up
Mean follow-up: 51± 6 months

Parameter		Toupet-Sleeve (n=19)
Sex ratio	Male	5 (26%)
	Female	14 (74%)
Age (years)		42 ± 15
BMI (kg/m^2)		43 ± 5
ASA score	I / II	17 (89%)
	III	2 (11%)
Alimentary profile	volume	8 (42%)
	other	11 (58%)
Esophagitis	Grade A	15 (74%)
	Grade ≥ B	4 (26%)

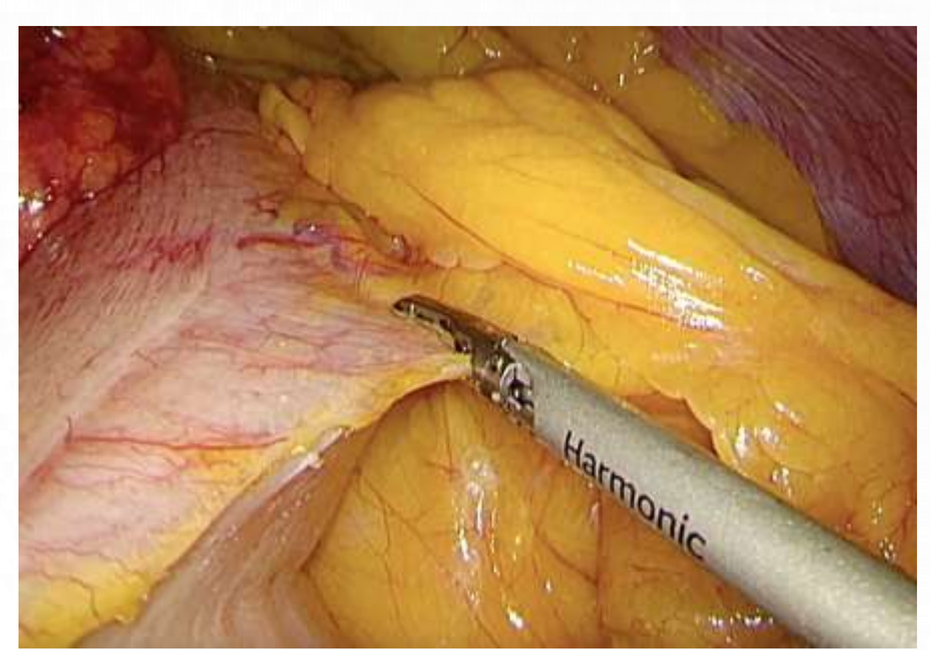
SURGICAL TECHNIQUE
STEP 1: DISSECTION OF THE ESOPHAGUS

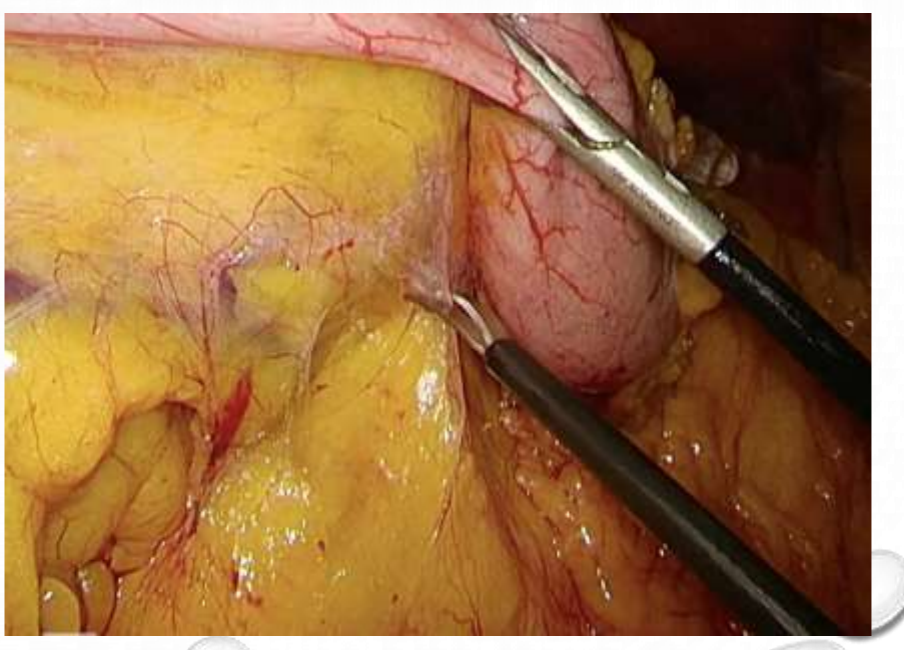
IN PATIENTS WITH HIATAL HERNIA (N=13) REDUCTION AND RESECTION OF THE SAC, CLOSURE OF THE CRURA



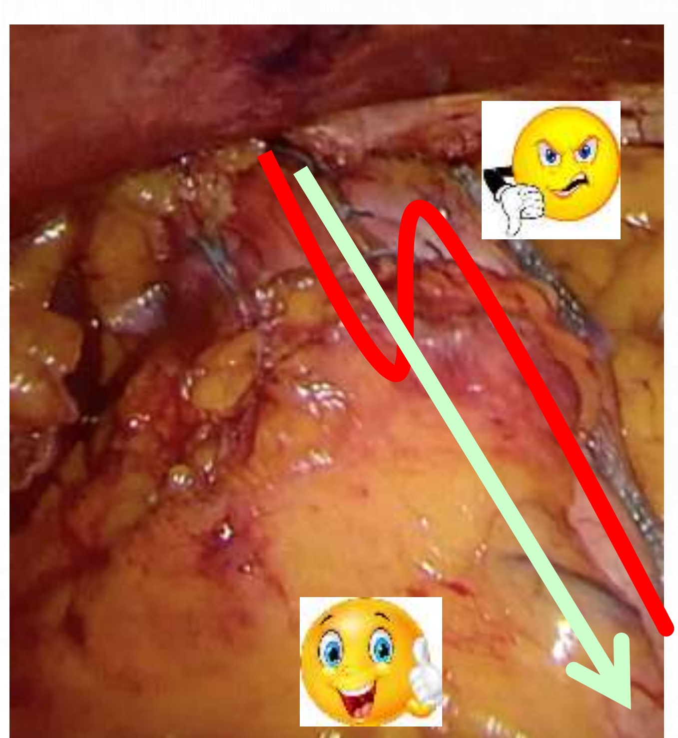
IN PATIENTS WITHOUT HIATAL HERNIA (N=6) MINIMAL PARAESOPHAGEAL DISSECTION

SURGICAL TECHNIQUE
STEP 2: DIVISION OF THE VESSELS ALONG THE GREATER CURVATURE AND RELEASE OF THE ADHESIONS IN THE LESSER SAC

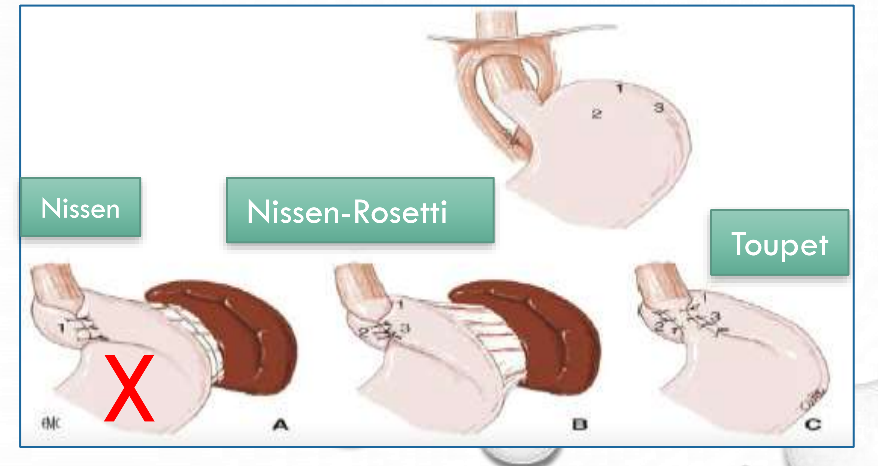




SURGICAL TECHNIQUE
STEP 3: CREATION OF THE WRAP
LESSON LEARNED FROM DR NOCCA

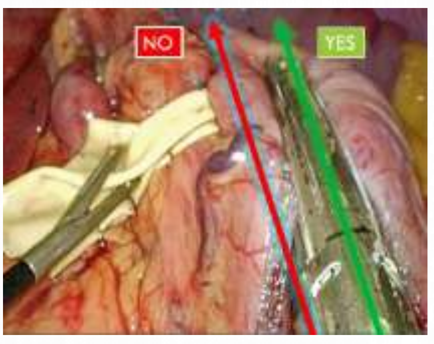


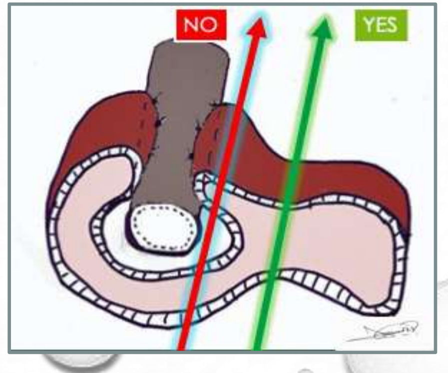
- FOOD MUST FALL DIRECTLY IN THE SLEEVE TUBE INSTEAD OF FILLING FIRST THE WRAP
- FOR THAT PURPOSE, THE WRAP MUST BE MADE WITH THE ANTERIOR PART OF THE FUNDUS



SURGICAL TECHNIQUE
STEP 3: CREATION OF THE WRAP

SURGICAL TECHNIQUE
STEP 4: TRANSECTION OF THE STOMACH
AT THE LEVEL OF THE WRAP, THE STAPLER MUST TAKE ONLY TWO LAYERS OF STOMACH AND NOT FOUR !





EARLY POST-OPERATIVE OUTCOMES

- DURATION OF SURGERY: 90 $\pm$ 10 MIN.
- EARLY POST-OPERATIVE COMPLICATIONS: 0
  - NO SIGNIFICANT DYSPHAGIA
  - NO WRAP PERFORATION (4 % IN THE LITERATURE)
  - NO LEAK ON THE STAPLED LINE
- MEDIAN POST-OPERATIVE HOSPITAL STAY: 2 DAYS (RANGE 2-4)

CONVERSION TO OTHER BARIATRIC PROCEDURE: N=2 (11%)

IFSO NAPOLI 2023

Symptoms	Barium swallow	Weight loss at the time of conversion	Reason for conversion	Delay / Initial surgery	Per-operative finding
Epigastric pain and dysphagia		BMI: 31 %EWL: 61 %TWL: 24	Invalidating symptoms	14 months	
No symptoms		BMI: 46 %EWL: 15 %TWL: 7	Insufficient weight loss	26 months	No abnormality except small dilatation of the sleeve and of the wrap

WEIGHT LOSS ONE YEAR AFTER SURGERY

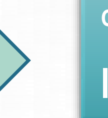
Parameter	Pre-op	1 year FU
BMI	43 ± 5	32 ± 5
BMI ≤ 30	0 (0%)	8/19 (42%)
%EWL	-	61 ± 21
%EWL > 50	-	14/19 (74%)
%TWL	-	24 ± 7

ACTA CHIRURGICA BELGICA
https://doi.org/10.1080/00015458.2021.1922189

ORIGINAL PAPER

A case-control comparative study between Toupet-Sleeve and conventional sleeve gastrectomy in patients with preoperative gastroesophageal reflux

Philippe Hauters[a], Etienne van Vyve[b], Iulia Stefanescu[a], Charles-Edouard Gielen[b], Sylvie Nachtergaele[a] and Manon Mahaudens[a]



%EWL of 75%
In sleeve gastrectomy

ACTA CHIRURGICA BELGICA
https://doi.org/10.1080/00015458.2020.1841485

ORIGINAL PAPER

Laparoscopic sleeve gastrectomy for morbid obesity in a Belgian-French prospective multicenter study: outcomes and predictors weight loss failure

Imad El Moussaoui[a], Etienne Van Vyve[b], Hubert Johanet[c], André Dabrowski[d], Arnaud Piquard[e], Thierry Delaunay[f], Benoit Navez[g], Philippe Hauters[h], Frank Sirisier[i], Patrizia Loi[a] and Jean Closset[a]

THE SAME %EWL WAS REPORTED BY THE SPEAKERS THAT ARE PARTICIPATING AT THAT SESSION !

Author		N	BMI Pre-op	Wrap	% EWL
					1 year
Nocca	SORD 2016	25	42	Nissen	58 %
Olmi	SORD 2017	40	44	Rossetti	62 %
Del Genio	Obes Surg 2020	32	46	Dor	56 %
Hauters	Acta chir belg 2021	19	43	Toupet	61 %
				Mean % EWL	**60 %**

LONG-TERM WEIGHT LOSS AND SUCCESS RATE (NO CONVERSION AND %EWL>50)

Follow-up	Pre-op	1 year	2 years	3 years	4 years
BMI	43 ± 5	32 ± 5	33 ± 6	34 ± 5	36 ± 8
Conversion		[illegible]	1	1	0
BMI ≤ 30	0 (0%)	8/19 (42%)	4/18 (22%)	4/17 (24%)	3/17 (18%)
%EWL	-	61 ± 21	57 ± 24	48 ± 26	43 ± 35
%EWL > 50	-	14/19 (74%)	12/18 (67%)	7/17 (41%)	6/17 (35%)
%TWL	-	24 ± 7	23 ± 9	19 ± 8	16 ± 12
Success rate	-	14/19 (74 %)	11/19 (58 %)	6/19 (32 %)	6/19 (32 %)

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Weight loos

INFLUENCE OF PRE-OPERATIVE BMI ON LONG-TERM WEIGHT LOSS

Evolution of %TWL

BMI ≤ 42

26
25
21
20

21
18
16
8

P<0.06

BMI > 42

PRE-OP
1 YEAR FU
2 YEARS FU
3 YEARS FU
4 YERAS FU

EVOLUTION OF GERD

- 5 FIRST PATIENTS HAD A PH-IMPEDANCE-METRY 3 MONTHS AFTER SURGERY
  - NO GERD WAS EVIDENCED !
- NO LONG-TERM ROUTINE ENDOSCOPIC CONTROL !
  - CLINICAL EVALUATION BASED ONLY ON SYMPTOMS EVOLUTION

GERD Evolution 4 years after surgery	Toupet-Sleeve N=17
Conversion N = 2	2 patients were converted and excluded for GERD assessment
No more symptoms without PPI treatment	15 / 17 (88%)
Persisting GERD	2 / 17 (12%)

CONCLUSIONS

- IN OUR EXPERIENCE TOUPET-SLEEVE IS ASSOCIATED WITH:
  - GOOD CONTROL OF GERD
  - “DECENT” WEIGHT LOSS IN PATIENTS WITH A LOW PREOPERATIVE BMI

BUT

  - A VERY POOR WEIGHT LOSS IN PATIENTS WITH BMI > 42