

Fast track surgery program in bariatric surgery, is it safe?

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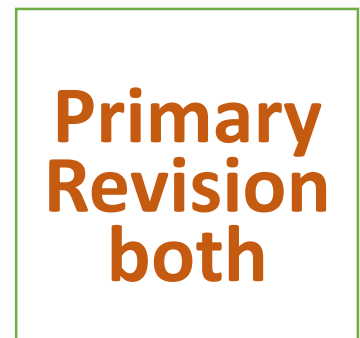


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Background

- Fast track surgery (FT)
 - coordinated perioperative approach aimed at reducing surgical stress and facilitating postoperative recovery
 - standard perioperative program in bariatric surgery.



Fast-Track Bariatric Surgery Improves Perioperative C and Logistics Compared to Conventional Care

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REVIEW ARTICLE

Fast-track laparoscopic bariatric surgery:

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OBES SURG
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NEW CONCEPT

Fast-Track in Bariatric and Metabolic Surgery: Feasibility and Cost Analysis Through a Matched-Cohort Study in a Single Centre

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Research Paper

Conventional versus fast track anaesthesia in an unselected group of patients undergoing revisional bariatric surgery

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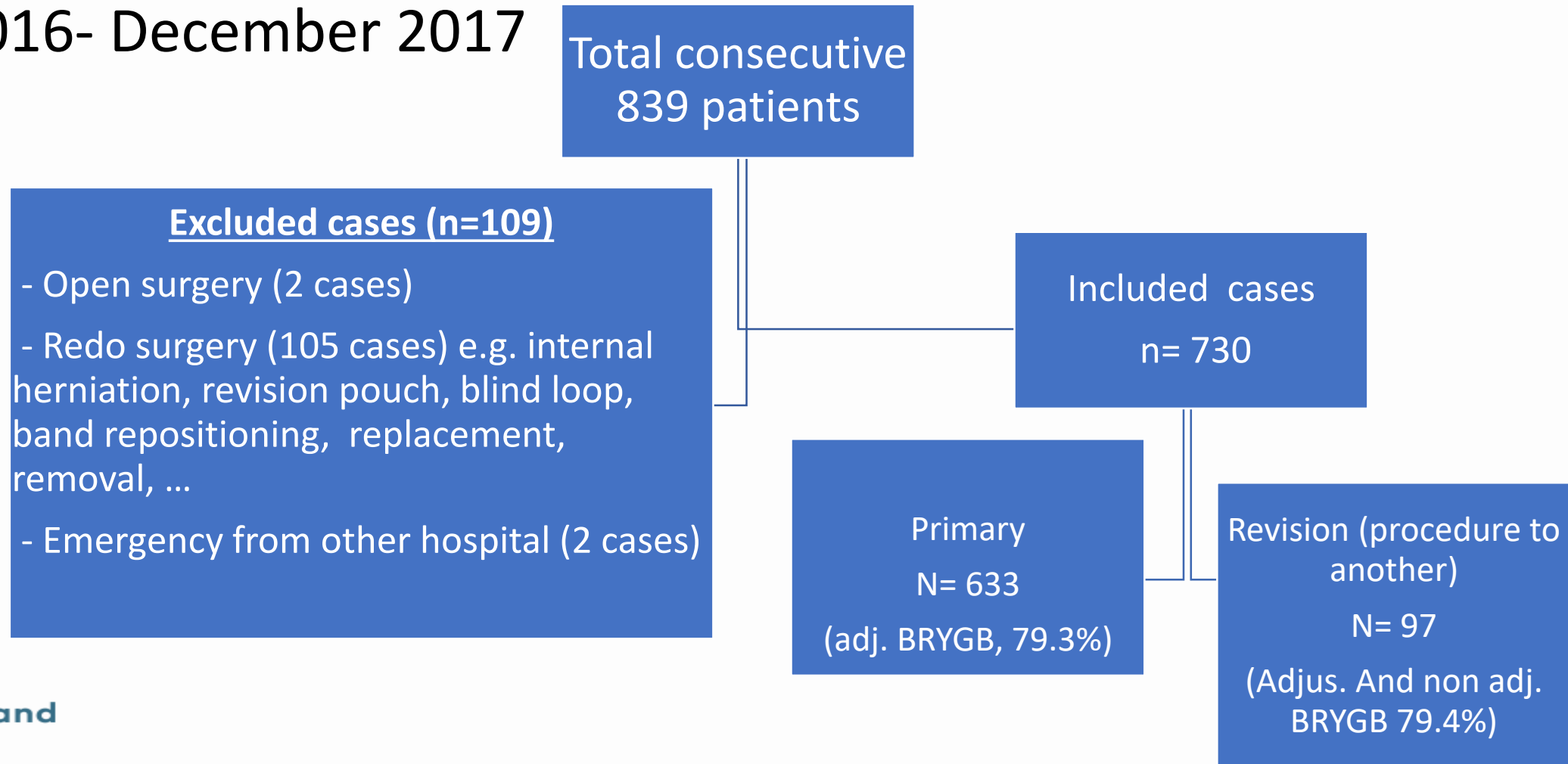


Aim of the present study

- Compare the efficacy and safety of FT perioperative protocol for management of primary and revision bariatric patients.
 - Identify factors that may limit early discharge in both groups and affect clinical outcomes.
-
- Primary endpoint: length of stay (LOS).
 - Secondary endpoints: clinical outcomes of early discharged FT managed primary and revision patients during 30 days postoperative:
 - Frequency of hospital contact
 - Readmission rate
 - Surgical complications that needed re-intervention.

Methodology

- Retrospective , prospective collective data of 30 days outcomes
- January 2016- December 2017



Fast track protocol

Pre-operative

- Education and counselling
- Organ optimization
- Stop smoking /alcohol
- No bowel preparation
- Weight loss
- Same day admission
- No Preoperative medication (ex. AB)

intra-operative

- FAST track anaesthesia
- Normothermia
- Pneumatic air pump
- Laparoscopic
- No drains/catheters
- Local analgesia injection at port sites

Post-operative

- Early enteral feeding
- Early mobilization
- Multimodal non opiod analgesics
- Discharge criteria:
 - ✓ stable
 - ✓ Oral intake
 - ✓ Spontaneous ambulation
 - ✓ Sp. Micturation and bowel movements
 - ✓ Controlled pain
 - ✓ Patient agree

**Target discharge
one day after surgery (one night)**



Statistics

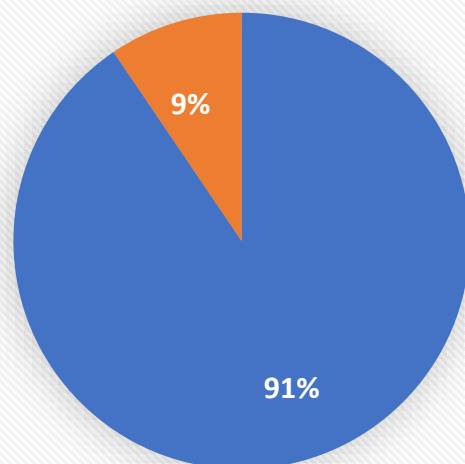
	Primary (n=475)	Revision (n=72)	P value
Median age in years (range)	46 years (19-70)	48 years (27-65)	0.68
Female number (%)	367 (77.3%)	65 (90.3%)	0.012
Male number (%)	108 (22.3%)	7 (9.7%)	
Median BMI kg/m2 (range)	42 kg/m2 (33-75)	38.5 kg/m2 (17-55)	0.001
Smoker	49 (10%)	7 (9.7%)	0.87
Alcohol	122 (25.7%)	11 (15.3%)	0.055
Drug abuse	1 (0.2%)	0	0.69
Diabetes mellitus	90(18.9%)	8 (11.1%)	0.11
		24 (33.3)	0.34
		4 (5.6%)	0.001
		9(12.5%)	0.61
		4 (5.6%)	0.12
		1 (1.4%)	0.55
		5 (6.9%)	0.89
Hypothyroid	29 (6.1%)	6 (8.3%)	0.47
Sever joint problems	69(14.5%)	9 (12.5%)	0.64
Mortality risk class			
A	225(47.4%)	44(61.1%)	
B	202(42.5%)	28 (38.9%)	0.007
C	48 (10.1%)	0	
Median operative time in minutes (average)	70 (26-249 minutes)	121 (50-228 minutes)	0.001
Concurrent interventions	22 (4.6%)	14 (19.4%)	0.001
Intraoperative complications	22 (4.6%)	0	0.098

Median LOS (average)	1.14 (0.17-13.14 days)	1.15 (0.32-14.13 days)	0.238
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Length of stay: discharge time - admission time

Target: discharge the day after surgery (one night hospital stay; LOS=1)

Primary



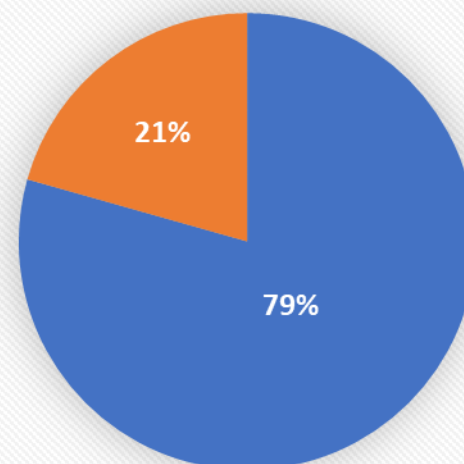
■ one night ■ more than one night

Median LOS

1.13

(0.17-14.09 days)

Revision



■ one night ■ more than one night

Median LOS

1.16

(0.32-14.13 days)

0.12

Difference between clinical outcomes of FT managed primary and revisions (total population = 730)

	Primary (n= 633, %)	Revision (n=97, %)	P value
Contact to the hospital	156 (24.6%)	30 (30.9%)	0.186
Readmission	39 (6.2%)	13(13.4%)	0.010
Reinterventio n	19 (3%)	6 (6.2%)	0.108

The difference in the clinical outcomes between LOS=1 and LOS ≥2

(excluding confounding factors which delayed the hospital stay)

- Postoperative complications (9 patients)
- Fresh bleeding per rectum (one, conservative)

	Primary (number 633, %)		P value	Revision (number 97, %)		P value
	One night N= 573	More than one night N=51		One night N= 77	More than one night N= 19	
Contact to the hospital	137 (23.9%)	16 (31.4%)	0.235	24(31.2%)	6 (31.6%)	0.97
Readmission	34 (5.9%)	3 (5.9%)	1.000	10(13%)	3 (15.8%)	0.71
Reintervention	11 (1.9%)	2(3.9%)	0.337	4 (5.2)	1 (5.3%)	1.000

Safety of the early discharge in primary and revision (LOS=1, n= 481)

	Primary (n=573, %)	Revision (n=77, %)	P value
Contact to the hospital	139 (24.3%)	24 (31.2%)	0.189
Readmission	35 (6.1%)	10 (13%)	0.026
Reintervention	11 (1.9%)	4 (5.2%)	0.072

Predictors for LOS (LOS ≥ 2)

Multivariate regression analysis(sig. <0.05)

1ry versus revision procedure		Sig.	RR	95% CI for EXP(B)	
				Lower	Upper
Primary bariatric procedure	Sex (female)	.053	2.431	.987	5.983
	Hypothyroidism	.006	3.201	1.386	7.392
	Asthmatic	.020	2.914	1.183	7.181
	Operative time (every minute)	.003	1.024	1.008	1.040
	Operative time (more than 2 hours)	.476	.535	.096	2.990
	Associated non-bariatric procedure	.074	2.466	.917	6.631
Revision bariatric procedure	Age (50 years or more)	.250	1.869	.644	5.426
	Operative time (more than 2 hours)	.044	3.243	1.033	10.179

Risk factors for clinical outcomes

1. No predictors for hospital readmission
2. Predictors for contact hospital.

		Sig.	RR	95% C.I. for EXP(B)	
				Lower	Upper
Univariate analysis Primary	Gender (female)	.047	1.609	1.006	2.575
	Age	.093	.986	.971	1.002
	Age less than 50 years	.006	1.750	1.175	2.608
	40- 49 years	.011	1.814	1.147	2.869
	30-39 years	.103	1.528	.918	2.543
	Less than 30 years	.019	2.016	1.121	3.626
Multivariate regression analysis Primary group only	Gender (female)	.116	1.458	.911	2.333
	Age	.079	1.047	.995	1.103
	Less than 30 years	.017	8.087	1.442	45.353
	30-39 years	.027	3.963	1.169	13.442
	40- 49 years	.005	2.943	1.395	6.211

3. Predictors for re-intervention.

Primary bariatric procedure		Sig.	RR	95% C.I.for EXP(B)	
				Lower	Upper
Multivariate logistic regression analysis Revision procedures	Operative time more than 2 hours	.015	5.839	1.410	24.186
	DM	.061	2.548	.958	6.779
	Intra-operative complications	.062	3.752	.935	15.059
Multivariate logistic regression analysis Revision procedures	Age	.652	1.038	.884	1.219
	BMI (inversely related)	.045	.858	.739	.997
	Hypercholesterolaemia	.160	5.247	.521	52.864
	Associated non-bariatric procedure	.048	8.196	1.020	65.837

Conclusion

- Fast track protocol is feasible and safe in the revision bariatric procedures.
- One day discharge is safe in revisional surgery; operative time more than 2 hours predictor for longer stay in revision bariatric procedure.
- BMI and concurrent interventions were the predictors for reoperation in revision group