

# PRESENTATION BÝ DR. MAHMOUD ABD EL-NABÝ METWALÝ ABD EL-SHAFÝ

ASSOCIAT PROFESSOR OF GENERAL COLORECTAL SURGERY MANSOURA FACULTY OF MEDICINE **ABOUT RESEARCH ARTICLE** 

#### FUNCTIONAL OUTCOME AND LIFE QUALITY AFTER UNILATERAL FIXED PROXIMALLY- BASED GLUTEOPLASTY FOR END-STAGE FECAL INCONTINENCE Published: 28 February, 2017

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# INTRODUCTION

- Fecal incontinence (FI) is a distressing condition that has a great impact on patients' quality of life. Wald A (2007).
- Sometimes all treatment options fail to restore an acceptable continence level and the ultimate solution for the patient will be creation of permanent stoma. Norton C, et al.(2005).

# Chetwood first described gluteoplasty for the treatment of FI in 1902.

- Different techniques were advocated for performing gluteoplasty.
  - Using unilateral or bilateral muscle flaps
  - Using proximally or distally based muscle flaps.
  - Creation of free floating flaps or fixing them to the contralateral ischial. Hentz V (1982)

Proximally-based gluteus muscle flaps were recommended over distally-based ones as they can extend for longer distance enabling its tension-free wrap around the anal canal easily. Pak-Art R et al. (2002)

Guelinckx et al. fixed a unilateral proximally-based gluteus muscle flap to the contralateral ischial tuberosity to restore the resting length of the muscle flap and considered this to be a prerequisite for good functional outcome.

# AIM OF THE WORK

- The aim of the current study was to evaluate the functional outcome of patients with end-stage FI after proximally-based gluteoplasty performed with fixation of the gluteal muscle flap to the contralateral ischial tuberosity.
- The functional improvement was assessed by the improvement in Wexner continence score and the improvement in life quality of the patients.

# PATIENTS AND METHODS

## Study design and setting

We retrospectively evaluated the functional results of 17 patients with end-stage FI treated with unilateral fixed proximally-based gluteoplasty between April 2015 and July 2016. Patients were assessed, operated on, and followed in private hospitals in Mansoura city, Egypt.

# PATIENTS AND METHODS Study design and setting Ethical approval for the study was obtained from the institutional review board of Mansoura Faculty of Medicine (code: R/16.04.72).

#### **ELIGIBILITY CRITERIA**

- We included patients with major endstage FI due to External anal sphincter (EAS) failure.
- Major FI was defined as incontinence to diarrhea or solid stool.
- End-stage FI was defined as the worst degree of FI in which the only remaining option for treatment, other than muscle transfer, is diversion.

#### Detailed history

- The degree of FI was assessed using Wexner continence score Jorge JM, Wexner SD (1993) with special emphasis made on symptoms as urgency and the sense of rectal distension.
- The impact of FI on patients' quality of life was evaluated using the fecal incontinence quality of life (FIQL) score Rockwood TH et al. (2000).
- Patients were assessed by endoanal ultrasonography (EAUS) to evaluate the integrity of the EAS, and by electromyography (EMG) for assessment of the contractile activity of both gluteus maximus muscles.

## SURGICAL TECHNIQUE



#### FOLLOW-UP AND OUTCOMES ASSESSED

- Patients were followed every week for one month, then on monthly basis for at least six months. At every visit wound healing was assessed by the operating surgeon.
  - At 6 months postoperatively, the continence state was assessed using Wexner score and quality of life was evaluated using FIQL.

#### FOLLOW-UP AND OUTCOMES ASSESSED

- Patients were asked to grade their degree of satisfaction with the operation as 1: satisfied, 2: partially satisfied, and 3: not satisfied.
- The primary outcome of the study was the improvement in Wexner score and FIQL at six months of follow-up, secondary endpoints included operation time, hospital stay, and postoperative complications.

### **RESULTS** Patients' characteristics

- Seventeen patients with end-stage FI were studied.
- Patients were nine males and eight females with mean age of 19.1± 12.1 years, ranging between fi ve and 42 years.

Causes of end-stage FI were surgery for anorectal malformations (ARMs) (n=7), surgery for congenital megacolon (n=4), surgery for anal fistula (n=2), obstetric trauma (n=2), hemorrhoidectomy (n=1) and rectal prolapse (n=1).

The mean preoperative Wexner continence score was 17.8 ± 2.1 which decreased significantly to 4.06 ± 4.2 at six months postoperatively. All parameters of FIQL significantly increased postoperatively (Table 1).

Table 1: Wexner score and quality of life before and after the operation.							
Variable		Pre-operative	Postoperative	P value			
Wexner continence score		17.82 (± 2.13)	4.06 (± 4.25)	<0.0001			
	Life style	1.888 (±0.457)	3.582 (± 0.405)	< 0.0001			
	Coping/behavior	1.929 (±0.482)	3.559 (± 0.397)	< 0.0001			
FIQUIS	Depression	1.9 (± 0.462)	3.494 (± 0.471)	< 0.0001			
	Embarrassment	1.865 (± 0.517)	3.541 (± 0.446)	< 0.0001			

#### Table 2: Wexner score and quality of life before and after the operation for patients with previous surgery for anorectal malformations.

Variable		Pre-operative	Postoperative	P value
Wexner continence score		19.43 (± 0.79)	8.57 (± 1.51)	< 0.0001
	Life style	1.443 (± 0.251)	3.171 (± 0.229)	< 0.0001
	Coping/behavior	1.443 (± 0.172)	3.157 (± 0.237)	< 0.0001
FIQLIS	Depression	1.443 (± 0.172)	3.014 (± 0.261)	< 0.0001
	Embarrassment	1.343 (± 0.172)	3.086 (± 0.261)	< 0.0001

Eleven (64.7%) patients reported complete satisfaction, four (23.6%) were partially satisfied, while two (11.7%) were not satisfied with the outcome of their operation.

The degree of improvement in the continence level varied according to the preoperative size of the EAS defect.

Ten patients had a defect involving less than 50% of the EAS, eight of which became completely continent after gluteoplasty; while two complained of minor FI (Wexner score less than 5).

In seven patients with history of surgical correction of ARM, the majority of the EAS was deficient, those patients showed partial improvement and were continent to solid stool only.

- The mean operation time was 61.7± 8.3 (range, 50-75) minutes.
- The mean hospital stay was 4.5± 0.7 (range, 3-5) days.
- Complications occurred in four (23.5%) patients;
  - Disruption of the perianal wound occurred in two patients.
  - One patient developed infected wound collection.
  - One female patient complained of numbress sensation in the leg.
- The median follow-up period was 11 (range, 6-21) months, 88% of the patients were followed for more than 6 months.

# CONCLUSION

The initial functional outcomes of unilateral proximally based fixed gluteoplasty for end-stage Fl are excellent provided that an adequate remnant of the EAS is present, otherwise the functional results are less than satisfactory, yet associated with significant improvement in patient's quality of life if simple compensatory actions are added.

