

# Evaluation of Diastasis of the Recti Muscles Correction using Two Different Techniques: A Comparative Study.

**Amr A. Mabrouk, MD; Hesham A. Helal, MD; Nada A. Mahmoud, MD.**

**Disclosure/Financial Support:** None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

**INTRODUCTION:** The technique used for correction of rectus abdominis diastasis has been a debatable issue since the original description of abdominoplasty. The aim of this study is to evaluate the long term efficiency of two different methods used for plication of the anterior rectus sheath during abdominoplasty

**PATIENTS AND METHODS:** The study was conducted on 40 patients with normal body mass index having Rohrich type IV B deformities. All were females; with age ranging from 31 to 43 years. The patients were divided randomly into two groups based on the technique used for plication of anterior rectus sheath: Group (I) included 20 patients who underwent the rectus abdominis "myofascial release" Group (II) included 20 patients who underwent conventional midline plication of the external oblique aponeurosis.

Patients are assessed and the 2 groups were compared using;

- (1) Hip waist ratio preoperative and postoperatively at 3 and 6 months.
- (2) the width of rectus diastasis using computed tomography of their anterior rectus abdominis sheath preoperative and postoperatively at 3 and 6 and 12 months at 3 points: a) at the umbilicus, b) midway between umbilicus and xiphoid process and c) midway between umbilicus and symphysis pubis.
- (3) Evaluation of ventilatory function using spirometry and intraoperative measurement of intra-abdominal pressure and airway resistance before and after plication of the anterior rectus sheath.

**RESULTS:** Postoperative follow-up time averaged 14 months (range 12-24 months). A significant reduction in the mean distance between rectus muscles before surgery and 12 months postoperatively was noted with no statistically significant difference between both groups. Most of the cases showed no recurrence of diastasis except one in group I and two in group II. There was a significant reduction in spirometry values after surgery but there was no correlation between the type of plication and changes in spirometry.

**CONCLUSION:** Plication of the anterior rectus sheath is a mandatory procedure to correct rectus diastasis for long lasting results.

## REFERENCES:

- 1- Mestak O, Kullac R, Mestak J, Nosek A, Krajcova A, Sukop A. Evaluation of the long-term stability of sheath plication using absorbable sutures in 51 patients with diastasis of the recti muscles: an ultrasonographic study. *Plast Reconstr Surg.* 2012 Nov;130(5):714e-719e.
- 2- Tadiparthi S1, Shokrollahi K, Doyle GS, Fahmy FS. Rectus sheath plication in abdominoplasty: assessment of its longevity and a review of the literature. *J Plast Reconstr Aesthet Surg.* 2012 Mar;65(3):328-32.