Impact of rapid weight loss via Bariatric surgery on medication use in patients with COPD

Cristina Botero-Fonnegra MD, Roberto J. Valera MD, Mauricio Sarmiento Cobos MD, Emanuele Lo Menzo MD, PhD, FACS, FASMBS, Samuel Szomstein MD, FACS, FASMBS, Raul J. Rosenthal MD, FACS, FASMBS

Department of General Surgery and The Bariatric and Metabolic Institute, Cleveland Clinic Florida

Introduction and Objectives

- The relationship between Obesity and Chronic Obstructive Pulmonary Disease (COPD) has not been well described.
- Obesity has been associated with decreased pulmonary function.

➢This study aims to determine the impact of rapid weight loss following Bariatric Surgery in patients with COPD related medications.

Methods

- A retrospective review of patients with COPD who underwent Bariatric Surgery at our institution from 2012 to 2018 was conducted.
- Medication use for COPD before and after the procedure was assessed
- Patients were followed up at 12 months.

Results

- A total of 18 patients were reviewed.
- Our population was predominantly females, with 55.5% (n=10) and a mean age of 61.11 ± 10.82.

	Preoperative (n=18) Mean ± SD or %(n)	Postoperative (n=18) Mean ± SD or %(n)	p value
BMI (Kg/m²)	46.20±9.07	35.22±6.42	<0.0001
Decrease in medication use	-	38.90 (7)	<0.0001
Increase in medication use	-	11 (2)	0.486
Stopped medication	-	27.8 (5)	0.045
Changes in the # of medication used			
0 to 1	22.3 (4)	50 (9)	0.083
2 to 3	66.7 (12)	44.4 (8)	0.180
More than 3	11.1 (5.6)	5.6 (1)	1.000

Conclusion

Our finding suggests a significant decrease in COPD related medication use in patients who underwent bariatric surgery after a year of follow-up. Prospective studies with a larger population are needed to confirm our results

References

1. Hanson C, Rutten EP, Wouters EF, Rennard S. Influence of diet and obesity on COPD development and outcomes. *Int J Chron Obstruct Pulmon Dis*. 2014;9:723-733. Published 2014 Aug 5. doi:10.2147/COPD.S50111.
2. Goto T, Tsugawa Y, Faridi MK, Camargo CA Jr, Hasegawa K. Reduced Risk of Acute Exacerbation of COPD After Bariatric Surgery: A Self-Controlled Case Series Study. Chest. 2018 Mar;153(3):611-617. doi: 10.1016/j.chest.2017.07.003. Epub 2017 Jul 14. PMID: 28716643.