Al-Kunooze Scientific Journal
e-ISSN: 2706-6223
P-ISSN: 2706-6231
https://www.asj.kunoozu.edu.iq/
2026, 12(2):109-117

A Comparative Analysis of Anthropometric and Metabolic Parameters in Patients Four Years Post-Sleeve Gastrectomy

Rafida M. Al-Amiri
University of Basrah, College of Dentistry, Department of Basic Sciences, Basrah, Iraq
Corresponding author E-mail: rafeda.abdalhussain@uobasrah.edu.iq

Abstract

Background: Laparoscopic Sleeve Gastrectomy (LSG) is highly effective for weight loss, but long-term data regarding the durability of metabolic improvements remain varied. This study aimed to evaluate how significant metabolic markers—specifically blood sugar, renal function (urea), and lipid profiles [cholesterol/High Density Lipoprotein (HDL)] evolve alongside body mass index (BMI) over a 4-year period. **Methods:** A retrospective analysis of 30 patients was conducted, comparing preoperative data to 4-year follow-up results. **Results:** Among 30 patients aged 19-54 years [mean age: 34.67 ± 12.11], a sustained reduction in BMI and blood sugar was observed, with a significant increase in HDL levels. Younger patients had a substantially greater reduction in BMI over the 4-year postoperative period than older patients, and male patients tended to show greater postoperative changes in most metabolic parameters. **Conclusion:** The findings will provide insight into the long-term efficacy of LSG as metabolic surgery rather than just a weight-loss procedure.

Keywords: Sleeve Gastrectomy, BMI, Blood Sugar, Cholesterol, and HDL

Introduction

The best strategy for achieving long-term weight loss is bariatric surgery, which improves all obesity-related comorbidities [1]. Obesity is regarded as a key risk factor for a number of serious and long-term medical problems, including cancer, diabetes mellitus, cardiovascular disease, and musculoskeletal disorders [2]. Nevertheless, much remains to be learned about the physiological and metabolic changes following sleeve gastrectomy (SG) [3]. Bariatric endoscopy has recently been added to the list of treatments for obesity and related medical conditions, acting as a bridge between medical medicines, dietary and

Published by: Al-Kunooze University, Basrah, Iraq