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### ABSTRACT

#### **The Role of Drain Placement in Post-Bariatric Surgery Bleeding and Leak Detection: A Palestinian Main Center Experience (2017-2021)**

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**Background:** Bariatric surgery is becoming among the more common options for weight reduction in individuals with obesity and metabolic disease. Various surgical approaches, including sleeve gastrectomy (SG) and gastric bypass, are utilized. Each with its own set of complications, including bleeding and leaks. The use of intraoperative drains in bariatric surgery has been a routine to assist in the detection of said complications. This use is becoming more controversial, with conflicting evidence regarding their efficacy in detecting complications such as bleeding and leaks.

Bariatric surgery, like sleeve gastrectomy (SG) and gastric bypass, is becoming increasingly popular for weight loss in obese and metabolically ill individuals. However,



these procedures come with complications, including bleeding and leaks. Surgeons often use intraoperative drains to detect these issues, but the effectiveness of this practice is debated due to conflicting evidence.

**Objective:** This research aims to investigate the effectiveness of drain placement in detecting bleeding and leaks following Bariatric surgery, based on data collected from the Main Center Experience between 2017 and 2021.

**Methods:** This is a retrospective cross-sectional study, with data from 495 patients who underwent bariatric surgery at the primary bariatric center in Palestine, between 2017 and 2021. The patients' demographics, comorbidities, surgical complications, and drain usage were collected using Excel sheets, managed, and then analyzed by SPSS.

**Results:** The study included 494 patients, predominantly females (69.0%) with a median age of 39.5 years. Sleeve gastrectomy was the most common procedure (78.1%). Postoperative complications occurred in 3.0% of patients, with bleeding being the most prevalent (1.4%). Drain placement was routine (82.0%), but no significant correlation was found between drain output and signs of bleeding, such as heart rate and blood pressure. However, a weak inverse correlation was observed between drain output and hemoglobin levels on the first postoperative day.

**Conclusion:** While drains are commonly used in bariatric surgery, their efficacy in detecting complications such as bleeding and leaks remains uncertain. The absence of a strong correlation between drain output and signs of bleeding indicates that clinical assessment remains crucial for identifying postoperative complications. With these findings, we can recommend a more thoughtful use of the drains to Palestinian surgeons in bariatric surgeries.

**Keywords:** Bariatric surgery, Drain, Bleeding detection, Leak, Complications.