ROLE OF MULTIDETECTOR CT IN EARLY DETECTION AND MANAGEMENT OF POST-OPERATIVE COMPLICATIONS OF BARIATRIC SURGERIES

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Introduction

Bariatric surgery has emerged recently as an ideal therapeutic strategy, especially in morbid obesity, when medical therapy based mainly on diet fails.

Two surgical methods are used for achieving weight loss in obese patients: bypass procedures in which mal-absorption is achieved by bypassing segments of the gastrointestinal (GI) tract, and restrictive procedures in which stomach volume is reduced to induce early satiety. Proponents of bariatric surgery have instead promoted different types of restrictive procedures (combined with a bypass element sometimes) to induce weight reduction, including Roux-en-Y gastric bypass, laparoscopic adjustable gastric banding, and laparoscopic sleeve gastrectomy.

SG complications include leak/abscess, hemorrhage, splenic injury, and Porto-mesenteric occlusion. RYGB complications include leak/abscess, gastro-gastric fistula, small bowel obstruction, internal hernia, and intussusception. Although GB is waning in popularity, radiologists continue to see the legacy of these patients and complications include gastric prolapse, band erosion, and port/tubing mechanical failures.

Aim of the Work

The aim of this study was to assess the role of multi-detector CT in early detection and management of complications after bariatric surgeries**.**

Subjects and Methods

This prospective descriptive study was carried out during the period from May 2020 to March 2022 on 30patints (5males, 25females) who had bariatric surgeries; their ages ranges from 18 to 55 years with suspected post-operative complications based on clinical and/or radiological suspicion, referred to the Radiodiagnosis department Alexandria Main University Hospital for multi-detector computed tomography evaluation.

All patients included in the study underwent the following:

1-Complete history taking

2-Laboratory study: it included all routine laboratory work up as well as coagulation profile in cases managed by interventional procedures.

3-Ultrasound abdomen and pelvis

4-Computed tomography abdominal scan :

- Patient preparation
- Routine non-contrast CT scan for upper abdomen with imaging done from diaphragm to symphysis pubis in supine position,
- Then CT scan with oral contrast.

5- According to patient complaints other imaging modalities had been chosen as follows:

*Contrast-enhanced computed tomography (CE-CT).

Results

Distribution of the studied cases according to demographic data (n = 30)

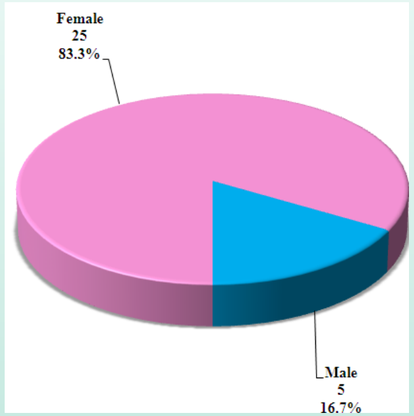

Figure1: Distribution of the studied cases according to sex (n = 30)

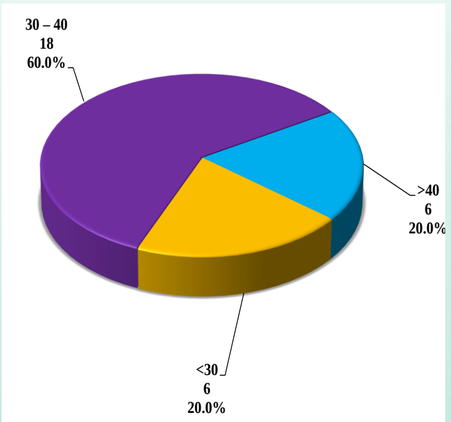

Figure2: Distribution of the studied cases according to age (n = 30)

Sequelae of bariatric surgeries and different complications related to type of surgery

Table: Distribution of the studied cases according to complications (n = 30 patients)

Complications	Total (n = 30)		Sleeve (n = 27)		Gastric band (n = 2)		Gastric bypass (n = 1)	
	No.	%	No.	%	No.	%	No.	%
Non complicated	6	20.0	4	14.8	2	100	0	0.0
Complicated	24	80.0	23	85.2	0	0.0	1	100
Gastric Leak	10	33.3	9	33.3	0	0.0	1	100
Intra-abdominal abscess	5	16.7	4	14.8	0	0.0	1	100
Pleural effusion	5	16.7	5	18.5	0	0.0	0	0.0
Splenic infarct	4	13.3	4	14.8	0	0.0	0	0.0
PMVO	3	10.0	3	11.1	0	0.0	0	0.0
Sub-capsular hepatic abscess	3	10.0	3	11.1	0	0.0	0	0.0
Bowel Ischemia	1	3.3	1	3.7	0	0.0	0	0.0
Hematoma	1	3.3	1	3.7	0	0.0	0	0.0
Gastro-bronchial fistula	1	3.3	1	3.7	0	0.0	0	0.0
Indirect colonic fistula	1	3.3	1	3.7	0	0.0	0	0.0