

Case Series

From Bariatric to Oncological Surgery: The Role of Routine Preoperative Upper Endoscopy in Bariatric Surgery

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Submitted: 21 March 2016

Accepted: 25 May 2016

Published: 15 June 2016

ISSN: 2379-0911

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OPEN ACCESS**Keywords**

- Bariatric surgery
- Upper endoscopy
- Gastric cancer

Abstract

Background: Routine preoperative upper gastrointestinal endoscopy (UGE) for bariatric surgery is still controversial. The optimal assessment for upper gastrointestinal tract in bariatric patients is not well defined although the prevalence of clinically relevant lesions found on the UGI is described in some observational studies.

Methods: The present study highlights the clinical usefulness of preoperative UGE based on two real cases taking place in our practice.

Results: Preoperative routine UGE prior to laparoscopic revisional surgery and gastric bypass surgery, showed adenocarcinoma in asymptomatic patients changing the initial surgical bariatric approach to an Oncological surgery.

Conclusions: Preoperative routine UGE for bariatric surgery has a high diagnostic significance and low cost in relation to its effectiveness. Since, findings with this conventional exploration allow changes in the therapeutic strategy and also provide an adjustable treatment to every patient, preoperative routine UGE should be recommended.

ABBREVIATIONS

UGE: Upper Gastrointestinal Endoscopy

INTRODUCTION

The rising prevalence of obesity and the success of bariatric surgery in durable and significant weight loss, have increased the number of surgeries performed in recent years [1]. Despite substantial improvements in bariatric surgery, there are a number of comorbid conditions and preoperative findings that require prior optimization to obtain the best surgical outcomes. Most guidelines for preoperative assessment, recommend UGE when the patient refers reflux symptoms, dysphasia and/or dyspepsia in the anamnesis [2,3]; otherwise there is evidence that UGE in patients without symptoms can identify lesions that

potentially can modify surgical management. Contrast studies have been posted as an alternative to an UGE because they may provide complementary information [3]. Nevertheless, when small tumors are developing in initial stages, contrast studies are limited to identify these early tumors. It is in these particular cases when more accurate preoperative diagnosis needs to be done in order to identify potentially curable diseases at early stages. The present study highlights the clinical usefulness of preoperative UGE based on two real cases taking place in our practice

CASE PRESENTATION**Case 1**

A 62-year-old lady with BMI 44 kg/m² and 120 kg weight with hypertension and joint pain was operated in 2001 in our

University Hospital performing a laparoscopic lap band. Two years after the operation, the patient had a BMI of 34 kg/m² and a 22 kg weight loss. Ten years after the last follow up visit in our unit, the patient came back complaining of nausea and vomiting during two months with occasional regurgitation and dysphasia for solids, we also advertised weight regain and a BMI of 39 kg/m².

Her analytics were normal including blood, renal and hepatic tests, glycemia and cholesterolemia. The contrast swallow study showed a pouch enlargement with band slippage and partial obstruction of the stomach (Figure 1). Band deflation was impossible to perform due to port-site infection and port breakage. Prior to laparoscopic revision surgery for band removal, we consider possible division of the band trough endoscopy, however findings after preoperative work-up for bariatric surgery with routine UGE, showed partial rejection of the band into the gastric body and the presence of a bulky tumor above the band infiltrating the distal esophagus which made not possible this initial not surgical approach (Figure 2). A biopsy was taken and the histological exam showed a well differentiated adenocarcinoma. A thoracic-abdominal CT scan was done discarding metastatic disease and infiltration of surrounding structures or carcinomatosis (Figure 3). An Ivory Lewis esophago-gastrectomy was performed without postoperative complications. Examination of the surgical specimen showed a T3N1 gastric neoplasia with tumor-free margin resection (Figure 4).

Case 2

A 57 years old man consulted the colorectal surgery unit of our hospital for recurrent episodes of diverticulitis. His medical history showed grade II obesity associated with metabolic syndrome and obstructive sleep apnea. Multiple failure attempts of weight loss with several diets and subsequent weight regain had been documented. The initial weight was 114 kg and his BMI 41 kg/m². The patient was transferred to our bariatric surgery unit for possible evaluation of laparoscopic gastric bypass. The preoperative routine UGE showed a lesion in the incisura angularis, 1.5 cm in diameter, with well- defined edges, and a shallow central ulceration, suggesting early gastric carcinoma (Figure 5).

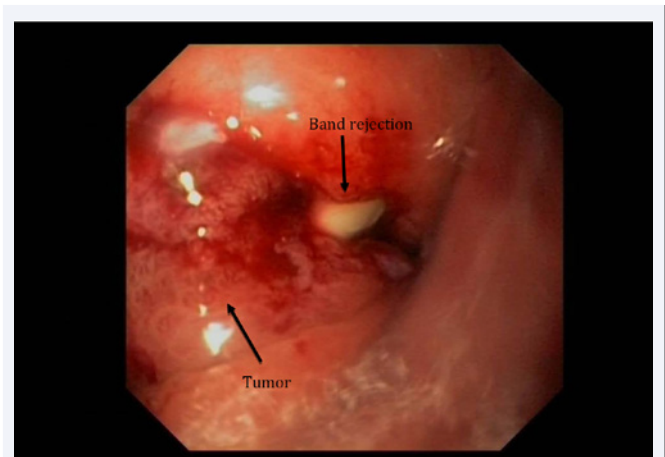


Figure 2 Preoperative UGE.

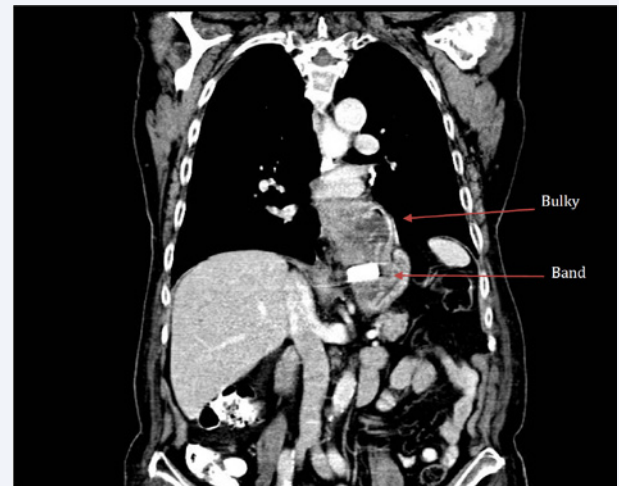


Figure 3 CT scan.

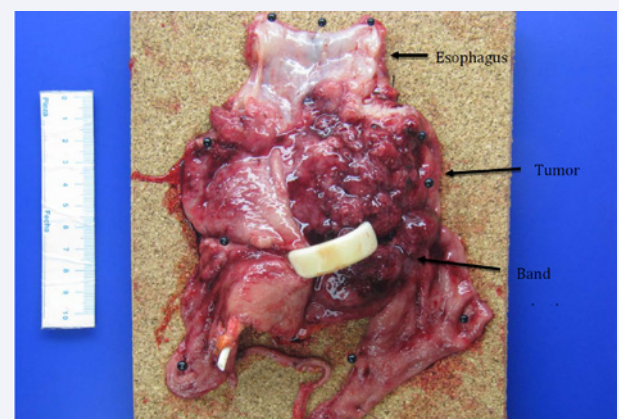


Figure 4 Surgical specimen case 1.

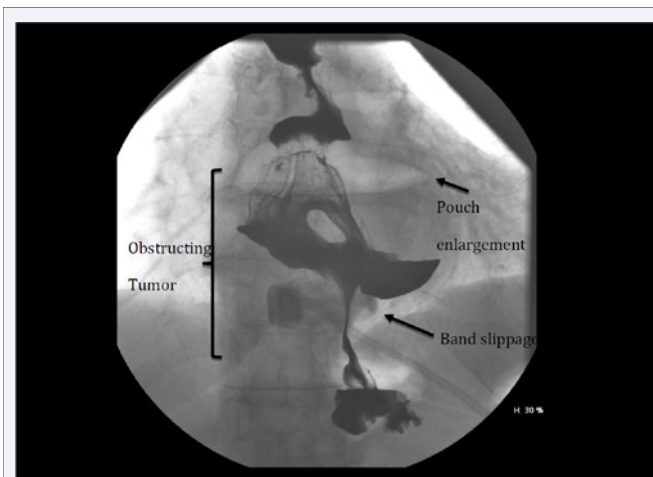


Figure 1 Contrast study.

A biopsy was taken and the histological studies showed a well-differentiated adenocarcinoma. An abdominal CT scan was done to complete tumor stage stadification. No metastatic disease was found. Laparoscopic subtotal gastrectomy with Roux-en-Y reconstruction was performed with an alimentary limb of 150 cm



Figure 5 Surgical specimen case 2.

as a technical option to intend both an Oncological solution and a lasting weight-loss effect. The surgical specimen confirmed a well differentiated early adenocarcinoma affecting the lamina propria and free lymph nodes of 28 resected.

DISCUSSION

Association between cancer and obesity has been widely shown in large epidemiologic series [4,5]. Adenocarcinoma has been described in the gastric pouch after vertical banded gastroplasty and gastric banding and in the bypassed stomach after Roux- en-Y gastric bypass (RYGBP) [6-8]. Because of this possible association between cancer and obesity it is important to perform a routine complete preoperative work up to all bariatric surgery candidates so that pathologies that could have further implications are not passed by European guidelines of the International Federation of Bariatric Surgery and the European Association for the Study of Obesity recognize and recommend the importance of studying preoperative Gastroesophageal reflux disease (GERD) without clearly defining the type of exam and the best candidates to apply it [2]. The American Association of Clinical Endocrinologist, The Obesity Society and the American Association for Metabolic and Bariatric Surgery based their recommendations on the presence or absence of reflux symptoms or dysphasia [3]. In this sense, we must bear in mind that in most cases where a carcinoma in situ or early gastric cancer is diagnosed, there are no digestive symptoms associated.

Carabotti et al., performed a prospective analysis with 142 patients demonstrating that the presence of symptoms may not be a reliable base to indicate an UGE. In this study the prevalence of endoscopic findings was similar in symptomatic and asymptomatic patients [9], showing that symptomatology itself would not be a reference to indicate this exploration. Estevez-Fernandez et al., in a prospective review of 331 candidates for bariatric surgery, conclude that preoperative UGE performed regardless of symptomatology, changed the therapeutic management in 52.6% of cases [10]. Finally Zeni et al., conducted another retrospective study with UGE in 159 patients showing that in 15 of these (9.4%) an unexpected pathology was detected delaying or modifying the initial surgical management [11].

In our first case the contrast study showed an obstruction of the stomach due to a possible band rejection and gastric erosion.

Revisional surgery was the initial surgical approach converting the lap band to a gastric bypass. After the routine UGE results, Oncological surgery became the new indication, changing the surgical approach and prognosis of the patient. In spite of this and looking to literature available, cross-sectional imaging with computed tomography should be considered first before UGE, especially when previous contrast study showed important complications due to band erosion and complete pre-operative information was required to plan the operation [12]. In our case this exam was done it after UGE. In fact cross-sectional imaging should be considered first especially before revisional surgery as it can guide surgery. In the second case, without a routine preoperative UGE, the gastric bypass would have been performed leaving in the bypassed stomach an initial adenocarcinoma lesion with the further impossibility to have access by conventional UGE for diagnosis and early treatment. Taking into account previous studies together with our own experience, we can conclude that preoperative routine UGE for bariatric surgery has a high diagnostic significance and low cost in relation to its effectiveness. Since, findings with this conventional exploration allow changes in the therapeutic strategy and also provide an adjustable treatment to every patient, preoperative routine UGE should be recommended.

ACKNOWLEDGEMENTS

Assistance with the study: We would like to thank especially general surgery nurses team for his assistance with the study during the patient's hospitalization.

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Cite this article

Valenti V, Tuero C, Ahechu P, Cienfuegos JA, Moncada R, et al. (2016) From Bariatric to Oncological Surgery: The Role of Routine Preoperative Upper Endoscopy in Bariatric Surgery. *J Surg Transplant Sci* 4(3): 1030.