Two morbidly obese patients are reported who underwent gastric bypass and suffered nausea and vomiting 1 month after the operation. Endoscopy and upper GI series showed no evidence of stomal stenosis or other mechanical cause for a GI obstruction. Control of vomiting by current antiemetic drugs such as bromopride and ondansetrone was unsuccessful. The patients were then given Remeron Soltab™ (mirtazapine, Organon, Brazil) 30 mg once per day orally for 2 to 8 months. Nausea and vomiting disappeared within days after beginning the medication.

Stomal stenosis is the main cause of vomiting after gastric bypass. After ruling out mechanical causes, other reasons for postoperative vomiting must be considered. Mirtazapine is a noradrenergic and specific serotonergic antidepressant, which blocks the 5-HT3 receptor, leading to an antiemetic effect. It has successfully been used as an antiemetic drug in patients undergoing chemotherapy. We concluded that mirtazapine may be a successful option to treat non-mechanical postoperative vomiting in morbidly obese patients after gastric bypass.

Key words: Morbid obesity, gastric bypass, postoperative complication, vomiting, mirtazapine, antiemetics

Reprint requests to: Prof. Dr. Fábio V. Teixeira, Rua Dr. Prósporo Cecilio Coimbra, 80 – Cidade Universitária – Marilia, SP, Brazil 17525-160. E-mail: fabioteixeira@flash.tv.br

Introduction

Roux-en-Y gastric bypass (RYGBP) is a common effective operation for treatment of clinically severe obesity.1 RYGBP is relatively safe and provides long-term weight loss.2 However, it has been reported that 1% to 5% of the patients may experience uncontrolled vomiting after the operation.3 Stomal stenosis of the gastroenterostomy is the major cause of vomiting after open or laparoscopic RYGBP.3 The problem is usually resolved by endoscopy and anastomotic dilatation. However, some of these patients may have a non-mechanical cause for the vomiting, once endoscopy and upper GI radiological evaluation show neither obstruction nor edema to justify the symptoms. However, it appears that non-mechanical postoperative nausea and vomiting after RYGBP cannot be successfully treated by current antiemetic drugs such as bromopride and ondansetrone.

Mirtazapine is a noradrenergic and specific serotonergic antidepressant that has successfully been used as an antiemetic drug in the treatment of chemotherapy-induced nausea and vomiting and also in the treatment of hyperemesis gravidarum.4 We report two cases of severely obese patients who...
underwent RYGBP, and experienced non-mechanical postoperative vomiting treated successfully with mirtazapine (Remeron Soltab™, Organon, Brazil).

**Case Report**

**Case 1**

A 26-year-old morbidly obese woman, BMI 41 kg/m², underwent open RYGBP. She had a pleural effusion on the 5th postoperative day with total resolution on pleural drainage and antibiotics. She was discharged on the 20th postoperative day with a liquid diet and no complaints. At 1 month after the operation, she had lost 20 kg (BMI 38 kg/m²). She was admitted to hospital with severe nausea and several episodes of vomiting per day. Endoscopy (Figure 1) and upper GI studies showed no obstruction. She was started on mirtazapine 30 mg qhs, with total resolution of the symptoms 2 days after commencement of the medication. The mirtazapine dose was reduced by 15 mg and discontinued 8 months after its beginning.

**Case 2**

A 19-year-old morbidly obese woman, BMI 50 kg/m², underwent open long-limb RYGBP.² She had an uneventful recovery and was discharged 5 days after the operation. At the 40th postoperative day, she started vomiting after meals, with no success after using antiemetic drugs bromopride, dimenhydrinate and ondansetrone. Her endoscopy and upper GI study showed no evidence of stenosis (Figure 2). She was given mirtazapine 30 mg qhs. Her symptoms improved 2 days after beginning the medication and totally disappeared in 2 weeks. The mirtazapine dose was reduced by 15 mg and discontinued 2 months after its beginning.

**Discussion**

To our knowledge, this is the first report of the use of mirtazapine to control non-mechanical vomiting after gastric bypass in morbidly obese patients.

Vomiting after a RYGBP is not an uncommon symptom. Stenosis of the gastroenterostomy has been reported as the main cause of vomiting weeks or months after open or laparoscopic RYGBP. Ischemia of the stomach or jejunal limb has been suggested as the main cause of stenosis. Endoscopy and upper GI radiological contrast study are sufficient to confirm the diagnosis of the stenosis. The treatment is frequently successfully achieved by balloon dilatation of the anastomosis.

We report two cases of RYGBP with postoperative vomiting. In both patients, a mechanical cause of the vomiting was ruled out. Symptoms could not be stopped by using IV antiemetic drugs such as bromopride and ondansetrone. We were only successful by using mirtazapine.

Mirtazapine, introduced by Organon in 1994, is a noradrenergic and selective serotonergic antidepressant (NaSSA), the first of a new class of therapy. Mirtazapine blocks specific serotonergic receptor

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Figure 1. Endoscopy showing no evidence of stenosis or edema at the gastroenterostomy.

Figure 2. Upper GI contrast study showing the gastric pouch and the anastomosis with no evidence of stenosis or stasis.