Letters to the Editor

Nutritional deficiencies after Roux-en-Y gastric bypass can be prevented by standard multivitamin supplementation

Dear Sir:

In a recent issue of the Journal, Gasteyger et al (1) report that nutritional deficiencies are common after Roux-en-Y (RY) gastric bypass and occur despite supplementation with the standard multivitamin preparation. This study is interesting because it shows what type of supplements are prescribed in clinical practice, but the data do not allow one to conclude that multivitamin supplementation cannot correct the deficiencies.

Indeed this study has many pitfalls. First, it is a retrospective study that included only 50% of the surgical cohort, and the reasons for excluding patients are not clear to the reader. Second, biological assessments of nutritional deficiencies are not reported in the manuscript: the author state that supplements were given as soon as the value measured was below the lower value of the reference range. However, if a specific substitution was started, the patient was considered deficient for the rest of the follow-up period. There was no systematic reevaluation of the need for that specific substitution during follow-up. Thus, at the end of follow-up, the diagnosis of deficiencies relied only on the prescription of supplement, with no attempt to ascertain the continued need of the prescription, although this was at the heart of the conclusion of the study. Third, the presurgical nutritional status of the patients is not reported, although it is well known that nutritional deficiencies are common in obese population before surgery, and are frequently untreated, as confirmed by our data (2, 3) and by a recent article published in the Journal (4). Thus, nutritional deficiencies recorded after surgery cannot be attributed solely to surgery. Fourth, there was no index of adherence to supplementation.

We recently conducted a prospective evaluation of the same variables in patients who had undergone either adjustable gastric banding or RY gastric bypass (3). The gastric bypass patients received systematic supplementation with a standard multivitamin preparation. We confirmed that nutritional deficiencies were frequent before surgery. Some were worsened by gastric bypass, including vitamin B-12. Overall, nutritional deficiencies, which were systematically assessed by laboratory investigations, were not increased by surgery in patients with a good index of adherence to multivitamin supplementation. Therefore, our study, which was conducted with an adequate, prospective design, does not support the conclusion of Gasteyger et al that multivitamin supplementation cannot correct nutritional deficiencies after gastric bypass.

No conflicts of interest were reported.

Séverine Ledoux

REFERENCE


Reply to S Ledoux and E Larger

Dear Sir:

We are grateful for Ledoux and Larger’s interest in our article, which was published recently in the Journal (1). Ledoux and Larger’s assumption that standard multivitamin supplementation can prevent nutritional deficiencies after gastric bypass surgery is hazardous and based only on their contrasting studies (2, 3), which are not supported by the international literature.

In their article published in 2006, Ledoux et al (2) concluded the following: “…multivitamin preparation did not correct the serum concentrations of vitamin A and E. Specific supplementation with vitamin A and E are thus required after RYGBP, and intramuscular supplementation, especially for vitamin B-12 could be required.” This assertion confirms our study’s results rather than Ledoux and Larger’s letter.

Moreover, in their recent study (3), in which the prevalence of nutritional deficiencies was prospectively evaluated in patients undergoing gastric bypass and treated with standard multivitamins...
The ineffectiveness of Elevit B9 in Ledoux et al’s study (2), which was used to prevent nutritional deficiencies, was not unexpected. In fact, Poitou et al (4), in their recent review, analyzed the main forms of multivitamin and multimineral supplements habitually used after bariatric surgery in Europe and conclude that management of nutritional deficiencies after gastric bypass requires rigorous medical follow-up and specific vitamin supplements. More importantly, Poitou et al also evaluated Elevit B9, and affirmed the following: “...in France, no marketed supplement available covers all the requirements. In addition, one does not know the proportion of each vitamin or minerals introduced which is really absorbed, the principal site of absorption remaining the excluded duodenum.”

A similar review, conducted in the United States by Parkes (5), evaluated multivitamin supplements specifically developed by several companies for bariatric surgery patients. Parkes concluded that, despite the use of these supplement prescriptions, “frequent monitoring of nutritional status and additional supplementation, as needed, can aid in preventing severe clinical deficiencies.”

Colossi et al (6) shared the same opinion after they evaluated the prevalence of nutritional deficiencies in 210 patients who underwent gastric bypass. They concluded that, “this study provides further evidence of the necessity of routine supplementation of vitamins and minerals using multivitamins, starting by the 30th day after bariatric surgery and persisting for the rest of the patient’s life. Certainly, this routine does not eliminate the need for complementary supply of some specific nutrients based on periodic clinical and laboratory evaluation.”

Vargas-Ruiz et al (7), in their prospective study that assessed adherence to standard multivitamin treatment after gastric bypass, concluded that “routine schema of vitamin supplementation is not sufficient to prevent iron and vitamin B-12 deficiencies in most patients.” Similar conclusions are reported by Love and Billett (8) in their review article. In 1991, Brolin et al (9) documented the inefficacy of multivitamin prophylaxis in preventing all nutritional deficiencies.

Surprisingly, of the abovementioned studies (1, 2, 4–9), only the study by Love and Billett (8) was reported in Ledoux et al’s bibliography (3), which indicates the bias and nonobjectivity of the author concerning nutritional deficiencies after bariatric surgery, especially concerning the efficacy of standard multivitamin supplements.

We will consider the criticisms of our work in an effort to improve the quality of our future publications. Nevertheless, we note that the patient’s exclusion criteria and biological assessments of nutritional deficiencies are provided in Figure 1 and Table 1 of the manuscript and are detailed in the text. The schemas used are habitually accepted by many international journals. Our work is admittedly a retrospective study, with the known limits of this type of design. The objective of our study was to simply evaluate the prevalence and type of nutritional deficiencies experienced after gastric bypass and not to investigate the causes and origins of such deficiencies.

In conclusion, the international literature data suggest that standard multivitamin supplements are ineffective at preventing nutritional deficiencies after gastric bypass, so I am unable to agree with Ledoux and Larger’s assumption.

No conflicts of interest were reported.

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REFERENCES


Social class and diet quality

Dear Sir:

The commentary by Darmon and Drewnowski, “Does social class predict diet quality?” (1) provides support for a phenomenon well described in the English literature (2, 3). As food costs rise, food selection narrows to those items providing the most energy at the lowest cost. When these conditions persist, essential nutrients disappear from the diet and malnutrition ensues (3, 4). This, the [Freidrich] “Engels’ phenomenon,” derives from an 18th century observation of the deteriorating diet of English working men whereby “…at the lowest round of the ladder, among the Irish, potatoes provide the sole food” (2–4). Nutritionists in the United States have not been exposed to this observation, reflecting, perhaps, its