



General Practitioners and Bariatric Surgery in France: Are They Ready to Face the Challenge?

Francesco Martini¹  · Andrea Lazzati² · Sylvie Fritsch¹ · Arnaud Liagre³ · Antonio Iannelli⁴ · Luca Paolino²

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Abstract

Purpose The epidemic of obesity has determined an important rise in popularity for bariatric surgery (BS) in France. The role of general practitioners (GPs) in the decision-making process of candidates to BS as well as in their life-long follow-up after surgery is therefore destined to grow up. The aim of this survey was to provide a picture of the actual knowledge of GPs about BS.

Methods The link to an e-questionnaire composed of 20 multiple choice questions was sent to all the 101 Departmental Councils of the French Medical Board, accompanied by a letter explaining the objectives of the study. Councils were asked to distribute the e-questionnaire to GPs in their department.

Results A total of 2224 GPs were solicited by e-mail in six departments and 288 surveys were completed, representing a 12.9% response rate. A proportion as high as 97.2% of GPs reported taking care of at least one patient operated on for BS and 88.5% declared having referred at least one patient for BS. Nevertheless, a considerable proportion of GPs declared not to have sufficient knowledge to manage BS patients. Moreover, 86.1% wished to receive more education and 83.7% declared to be available for participating in follow-up.

Conclusion Academic institutions, scientific societies, and all physicians involved in obesity care should actively participate in the correction of the educational gap of GPs in order to obtain an effective help in the complex challenge of facing the obesity epidemic.

Keywords Bariatric surgery · General practitioners · Survey response · Education · Management

Introduction

In France, obesity has reached epidemic proportions [1] increasing from 8.5% in 1997 to 15% in 2012 [2].

Bariatric surgery (BS) has proved to lead to sustainable results in the long term in terms of weight reduction and comorbidities' resolution and/or improvement, in contrast to lifestyle-based means [3]. Reduction in morbidity and

✉ Francesco Martini
framartini77@hotmail.com

Andrea Lazzati
andrea.lazzati@chicreteil.fr

Sylvie Fritsch
fritsch-sylvie@orange.fr

Arnaud Liagre
arnaud.liagre@orange.fr

Antonio Iannelli
iannelli.a@chu-nice.fr

Luca Paolino
lpaolino@hotmail.com

¹ Digestive and Bariatric Surgery Unit, Hôpital Joseph Ducuing, Toulouse, France

² Department of Digestive Surgery, Centre Hospitalier Intercommunal de Créteil, Créteil, France

³ Bariatric Surgery Department, Clinique des Cèdres, Comebarrieu, France

⁴ Digestive Unit, Archet 2 Hospital, University Hospital of Nice, Nice, France

mortality has been clearly demonstrated following BS, as well as its cost-effectiveness [4–6]. In France, BS is regulated by national guidelines driven by the French National Health Care Authority (Haute Autorité de Santé—HAS) in accordance with international recommendations [7].

Parallel to the increasing prevalence of morbid obesity, the popularity of BS in France has been growing progressively during the last decade. In 2014, a total 47,000 morbidly obese underwent BS, representing almost four times the number of bariatric procedures done in 2005 [8].

Such a spectacular rise in obesity prevalence, and its consequent increase in the number of BS procedures, is not without consequences on the health care organisation. First, how to provide a correct information and orientation for suitable candidates for BS? Then, how to provide life-long follow-up for such a huge number of patients?

In France, GPs are key figures in patients' health care coordination and orientation and their role is of crucial importance in the management of chronic diseases including obesity. GPs face daily obese patients and their opinions on BS play a pivotal role in orientating patients. On the other hand, their role in postoperative follow-up needs to be implemented in close collaboration with the multidisciplinary bariatric teams.

The aim of this study was to describe GPs' knowledge and attitude towards BS in France.

Methods

Target Population

The target population included all GPs practising in France.

Survey Design

A preliminary questionnaire was developed by two bariatric surgeons (FM and LP), based on a literature review and then modified after feedback from a group of five GPs experienced in the management of obesity and BS patients.

After validation, an electronic questionnaire was built up using SurveyMonkey® internet site. It was composed of 20 multiple choice questions and could be easily completed in less than 5 min. The link to the e-questionnaire was sent to all the 101 Departmental Councils of the French Medical Board, accompanied by a letter explaining the nature and objectives of the study. Five councils (5%) accepted to distribute the e-questionnaire to all GPs whose email address was available in their directory, together with a letter introducing the study. Anonymity of involved GPs was respected. The councils that accepted to participate in the s-present study reported the number of GPs to whom the e-link had been addressed. Among the five departments taking part in the study, four are situated in metropolitan France (Ariege, Dordogne, Morbihan, Seine-

Maritime), while Nouvelle-Caledonie is situated in the Pacific Ocean. The survey was also distributed to an additional 460 family physicians in the department of Haute-Garonne by mail using contact information obtained from the directory of the Digestive and Bariatric Surgery Unit of the Joseph Ducuing Hospital in Toulouse. The e-questionnaire was available during 3 months, from May 1 to July 31, 2017.

Statistical Analysis

Univariate analysis was performed to compare some answers according to education in BS. Group comparisons for categorical data were achieved using the chi-square or Fisher's exact test as appropriate. A *p* value < 0.05 was considered statistically significant. Statistical analysis was performed using IBM SPSS Statistics 20 (IBM Corp., Armonk, NY).

Results

A total of 2224 GPs were solicited by mail and a total of 288 surveys were completed, representing a 12.9% response rate.

Demographic characteristics of the study population are shown in Table 1.

Almost half of respondents had never received a specific training in obesity management; 19.4% reported to have had some training when at medical school and 35.8% declared to have followed some courses on obesity management after the degree in medicine. It has to be noted that 97.2% of respondents took care of at least one patient operated on for BS in their current practice; 15.6% declared to follow more than 10 BS patients.

Table 2 reports the level of knowledge of GPs on the management of obesity. Only one third of respondents reported to know the national guidelines for BS edited by the French

Table 1 Demographic characteristics of study population (*n* = 288)

Mean age, years (range)		50.4 (28–70)
Gender	Male	126 (43.8%)
	Female	162 (56.2%)
Patient volume	0–1000	130 (45.1%)
	1000–2000	120 (41.7%)
	> 2000	38 (13.2%)
Training in obesity management	None	136 (47.2%)
	During university	56 (19.4%)
	After university	103 (35.8%)
<i>N</i> of bariatric patients followed in current practice	None	8 (2.8%)
	1–10	235 (81.6%)
	10–20	34 (11.8%)
	> 20	11 (3.8%)

Table 2 General practitioners' knowledge about obesity management (*n* = 288)

Knowledge of national guidelines for bariatric surgery	Yes	93 (32.3%)
	No	195 (66.7%)
Agree with following statements	Obesity is primarily due to lack of willpower	10 (3.5%)
	Obesity is a disease with a strong genetic component	179 (62.2%)
	Dietary education alone is as effective as surgery	31 (10.8%)
	Surgery is the most effective treatment for type 2 diabetes	82 (28.5%)
	Results of dietary education alone are usually unsatisfactory	256 (89.9%)
Familiarity with surgical procedures	Gastric banding	253 (87.9%)
	Sleeve gastrectomy	265 (92%)
	Gastric bypass	267 (92.7%)
Bariatric procedures estimated as the most effective	Gastric banding	8 (2.8%)
	Sleeve gastrectomy	135 (46.9%)
	Gastric bypass	145 (50.4%)
Estimated malnutrition rate after bariatric surgery	< 1%	39 (13.5%)
	1–5%	145 (50.4%)
	> 5%	104 (36.1%)
Estimated mortality rate after bariatric surgery in France	< 0.1%	213 (74%)
	5%	70 (24.3%)
	> 10%	5 (1.7%)
Familiarity with vitamin supplementation after bariatric surgery	Yes	51 (17.7%)
	No	237 (82.3%)

National Health Care Authority. We analysed previous education in BS and found that GPs acquainted with recommendations were significantly more represented in the group having received post-university training vs groups with university training only or no training (46.6 vs 28.6 vs 24.3%, $p < 0.05$).

Some statements concerning obesity were proposed. Only a small minority (3.5%) still perceived obesity as a simple lack of willpower. A high percentage was aware of the role of genetics in the development of obesity. Dietary education alone was considered unsatisfactory by almost 90% of respondents and only 10% estimated it as effective as BS. Only 28.5% of GPs were aware of the efficacy of BS in inducing type 2 diabetes improvement and/or remission. These last data were only slightly influenced by education (25.7% in the group with no training, 21.4% among physicians with university training only, 36% in case of post-university education, NS).

The great majority of respondents reported to be familiar with the most common BS procedures and were aware of the superior effectiveness of gastric bypass and sleeve gastrectomy compared to gastric banding. Expected malnutrition rate

after BS was overestimated by 86.7% of respondents and only 17.7% declared to feel competent to manage vitamin supplementation. Significantly, more physicians in the group having received post-university training reported to be familiar with vitamin supplementation (27.2 vs 12.5% in the group with university training only and 13.2% among GPs with no specific training, $p < 0.05$).

Management of obese patients by GPs is reported in Table 3.

Considering the therapeutic options proposed to morbidly obese patients, the most popular was dietary education with referral to a specialist (88.9%), followed by referral to sports coach (63.2%). Referral to a bariatric surgeon was in the third position, proposed by 56.6% of respondents. Nevertheless, in two thirds of cases, it was the patient to initiate the

Table 3 General practitioners' management of obese patients (*n* = 288)

Availability of equipments adapted to obese patients	None	37 (12.9%)
	Examination table	100 (34.7%)
	Weight balance	99 (34.4%)
Weight measurement	Blood pressure cuff	236 (81.9%)
	Never	4 (1.4%)
	Each visit	214 (74.3%)
Therapeutic options proposed	Every year	70 (24.3%)
	No specific treatment	24 (8.3%)
	Dietary education supervised by GP	162 (56.2%)
Opening discussion about bariatric surgery	Referral to dietician or nutritionist	256 (88.9%)
	Referral to psychiatrist or psychologist	88 (30.6%)
	Referral to sports coach	182 (63.2%)
N of pts. referred for obesity surgery	Referral to bariatric surgeon	163 (56.6%)
	GP	104 (36.1%)
	Patient	184 (63.9%)
Reasons for patient referral to bariatric surgeon	None	33 (11.5%)
	1–10	227 (78.8%)
	11–20	24 (8.3%)
Availability for participating in postoperative follow-up	> 20	4 (1.4%)
	No referral	15 (5.2%)
	BMI	180 (62.5%)
Wish to receive education in postoperative follow-up	Failure of dietary management	226 (78.5%)
	Comorbidities	232 (80.6%)
	Psychological and social impact	172 (59.7%)
GP general practitioner	Patient request	242 (84%)
	Yes	241 (83.7%)
	No	47 (16.3%)
	Yes	248 (86.1%)
	No	40 (13.9%)

conversation on BS. In the analysis of factors leading to the decision of proposing BS, we took into consideration previous education and knowledge of BS recommendations. We found that post-university education pushed GPs to propose BS more than university education (46.6 vs 19.6% $p < 0.05$) or no training in BS (34.6%, NS). Knowledge of BS recommendations led GPs to propose more frequently the option of BS to their patients (46.2% of GPs take the initiative in case of BS recommendations knowledge vs 31.3% if lack of BS recommendations knowledge, $p < 0.05$).

A proportion as high as 83.7% of GPs declared to be available for patient follow-up after surgery. Similarly, 86.1% declared their wish to receive more education concerning postoperative follow-up.

Discussion

This study shows that in France, 97.2% of GPs take care of at least one bariatric patient and 88.5% declare having referred at least one patient for BS. This indicates that the great majority of French GPs already take care of BS patients in their current practice.

Nevertheless, a considerable proportion of family doctors showed not having the appropriate knowledge or an adequate education to feel comfortable to manage morbidly obese patients, particularly after BS. Almost half of respondents had never received a specific training in obesity management. Because of such an educational gap, only one third of respondents reported to be aware of the recommendations for BS and only 17.7% declared to feel comfortable with vitamin supplementation.

Limited understanding of the benefits and risks associated with different bariatric procedures and lack of comfort in educating patients as well as providing appropriate follow-up care is likely to be responsible for the “shy” attitude of French GPs in referring suitable candidates for BS. This survey showed that in two thirds of cases, the patient himself evoked the option of BS and patient’s demand was the primary reason for patients’ referral for BS. On the other hand, most family physicians declared to be ready to implement their role with 86.1% wishing to receive more education and 83.7% declaring to be available for participating in postoperative follow-up.

The desire of GPs to receive more education on BS has been outlined by surveys in other countries, in particular by Auspitz et al. in Canada [9] and by Giaro et al. in Poland [10]: both reported 92% of respondents wishing a specific training.

During the last decade, the role of the Internet as a source of health-related information has been constantly increasing. A recent French survey by Paolino et al. [11] among obese patients seeking BS found that the accountability of the e-information was evaluated by discussion with the GP in

83% of cases, confirming his or her role as favourite interlocutor during the decision-making process.

The present survey outlines several misconceptions among GPs, which might in turn moderate patients’ enthusiasm for BS. GPs tend to overestimate BS morbidity and mortality rate and to underestimate benefits on weight loss and comorbidities resolution.

In the present study, only 28.5% of GPs were aware of the effectiveness of BS on type 2 diabetes [12]. Expected malnutrition rate after BS, actually $< 1\%$ in the literature [13], was overestimated by 86.7% of respondents, while postoperative mortality rate, actually $< 0.1\%$ in France [14], was overestimated by 26% of GPs.

Analysing the current literature, we can find similar misconceptions about BS among GPs in several countries. Although the proportion of family physicians declaring to have a good knowledge about referral criteria and surgical procedures varies between 20 and 70%, all surveys are concordant in reporting that a remarkably smaller part of GPs uses to refer patients for BS on their own initiative [9, 15–18]. The most common reason for this reluctance is fear of complications and mortality [16, 18, 19].

Misconceptions of GPs about the effectiveness and risk patterns of BS may influence the decision-making process of their patients. A recent American study showed that only 32% of morbidly obese patients consider BS as an acceptable option of weight loss with perceived risks of surgery being the most significant barrier to its pursuit [20]. Two other studies from Germany and USA confirmed the same perceptions [21, 22].

Only one study dating 2005 exists in the literature addressing the topic of attitudes and practices of GPs concerning obesity management in France [23]. The attitude towards BS was not particularly supportive as the majority of GPs considered BS only in exceptional cases and 47% disagreed with the statement that BS was the only possibility for most of morbidly obese patients to significantly reduce their body weight and maintain the weight loss in the long term. Furthermore, only 42% of respondents considered themselves ready to manage obesity [23]. Comparing the present survey to the previous study, French GPs progressively developed a more positive and collaborative attitude towards BS and we can estimate the only residual obstacle to be their actual lack of knowledge.

Therefore, in our opinion, educational initiatives with GPs are mandatory in order to improve obesity management within their practices. Previous studies have shown that increasing physician understanding results in an increased willingness to refer patients for BS [15, 17]. The present survey confirmed that post-university education and knowledge of BS recommendations render GPs more supportive for BS and lead GPs to propose more frequently the option of BS. We also found that post-university education in BS proved to be significantly more effective in increasing GPs’ familiarity with

recommendations and patients' management, as well in rendering GPs more supportive for BS. These data support the need for an improvement in the current university education on BS.

Two possible pathways may increase the capacity of GPs in managing BS patients: the inclusion of a specific BS training in medical school and post-university courses led by tertiary referral centres in obesity care. The latter would also have the benefit to put in direct contact GPs with the multidisciplinary team actors in order to develop a close collaboration.

Besides medical education, medical societies might also promote deep diffusion of guidelines on the management of bariatric patients among GPs in order to increase the quality of bariatric care [24, 25].

Once their actual knowledge gap filled, GPs may represent a precious resource in the management of BS patients in consideration of the number of patients needing care.

The present study has several limitations linked to the low response rate, although this was comparable to that reported in other similar studies [9, 17]. Therefore, the representativeness of the sample and the extrapolation of these data to a national scale must be conducted with caution. Moreover, the voluntary nature of the survey can determine a self-selection bias as the GPs having participated may have more interest than the average in BS. Finally, knowledge and attitudes were self-reported and not objectively measured.

However, its main strength relies in the fact that it was the first survey to address the topic of the involvement of GPs in the management of BS patients in France.

Conclusion

GPs are the main interlocutors for the multidisciplinary BS team, both in preoperative and postoperative settings because of their central position in the health care system and their pivotal role in the decision-making process of obese patients. Therefore, academic institutions, scientific societies, and all physicians involved in obesity care should actively participate in the correction of the educational gap of GPs in order to obtain an effective help in the complex challenge of facing the obesity epidemic.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Statement of Human and Animal Rights This article does not contain any studies with human participants or animals performed by any of the authors.

Statement of Informed Consent Informed consent was obtained from all individual participants included in the study.

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