Presurgical Psychiatric Evaluations of Candidates for Bariatric Surgery, Part 1: Reliability and Reasons for and Frequency of Exclusion

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Objective: Many bariatric surgery programs include psychiatric evaluations as part of the preoperative screening procedure. Surveys of surgeons and mental health professionals have found variability in opinion regarding what psychosocial problems warrant denial of clearance for surgery. Few studies have reported the number of patients who are not cleared for surgery due to psychiatric reasons, and no study has reported the reliability of decision making. The goals of the present study were to examine the reliability of decisions to clear candidates for surgery, determine the percentage of candidates who were not cleared for surgery, and detail the reasons candidates were not cleared for surgery.

Method: Five hundred candidates for bariatric surgery were evaluated from July 2004 until July 2006 with semistructured diagnostic interviews for DSM-IV Axis I and Axis II disorders supplemented by a module specific to this population. Reliability for determining clearance was evaluated in 73 patients. Reasons for not clearing patients were recorded on the Surgery Clearance Form.

Results: Eighteen percent (N = 92) of the patients were not cleared for surgery. The κ coefficient of reliability of determining surgical clearance was 0.83. The most common reasons for the negative recommendation were overeating to cope with stress or emotional distress, current eating disorder, uncontrolled psychopathology, and the presence of significant life stressors. Only 1 patient was excluded for a lack of understanding of the potential risks of surgery.

Conclusions: The decision whether to clear candidates for bariatric surgery can be made reliably. Approximately 1 in 5 surgical candidates did not pass the initial psychiatric screening, usually because of current eating pathology, other forms of uncontrolled psychopathology, or difficulty coping with current life stressors.

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During the past few years, obesity has been identified as a worldwide public health problem reaching epidemic proportions.[1–3] The number of adults in the United States considered overweight, obese, and morbidly obese has significantly increased during the past 20 years.[4–8] Obesity has been linked to significant morbidity[6,9–11] and excess mortality.[12,13]

Weight loss programs based on diet, medication, psychotherapy, and exercise have demonstrated, at best, only modest success in achieving sustained weight reduction.[14,15] Because of the limited success of these weight loss treatment approaches, surgical interventions to achieve marked, sustained weight loss have increased in popularity.[16,17] For morbid obesity, bariatric surgery is considered the most effective treatment.[18–20]

Many bariatric surgery programs include psychiatric evaluations as part of the preoperative screening procedure. Some of the psychological factors considered important in determining who is not an appropriate surgical candidate include the presence of eating, mood, psychotic, personality, and substance use disorders; eating to regulate negative affect; history of noncompliance with treatment; and inappropriate expectations of life change due to surgery.[19,21–24] There are, however, no specific recommendations or guidelines to determine who is not a good surgical candidate on the basis of the results of a psychological evaluation. In part, the absence of such a recommendation probably reflects the lack of consistent data demonstrating the negative prognostic influence of psychological factors on surgical outcome, although well-designed, large-scale, long-term studies are lacking.

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Surveys of bariatric surgeons and mental health professionals evaluating candidates for bariatric surgery have found varying opinions as to whether certain factors warrant postponing, or contraindicate, surgery. For example, 20% of bariatric surgeons indicated that they would proceed with surgery in patients who binge eat, 2.7% would recommend against surgery, 27.3% would postpone surgery until the binge eating was addressed, and nearly half would decide on a case-by-case basis depending on the severity of the binge eating and other, unspecified factors.[25] Fabricatore and colleagues[26] surveyed almost 200 mental health professionals who had an average of 4 years' experience evaluating bariatric surgery candidates. One of the items of the survey asked the respondents to list "clear contraindications to surgery." Altogether, 14 factors were listed by more than 10% of the sample as absolute contraindications to surgery, although no specific item was listed by more than 50%. These results, too, suggest variability among clinicians in determining whether to clear a candidate for surgery.

There are only a few prospective studies of the number of patients who are not cleared for surgery due to psychiatric reasons. Powers and colleagues[27] reported that 50 (27.6%) of 181 candidates for bariatric surgery were not cleared, "most . . . for psychiatric reasons."[27(p472)] The specific reasons for not clearing patients were not described. Kinzl et al.[28] noted that approximately 5% of candidates for gastric banding were excluded because of psychosis, severe depression, or bulimia. Gertler and Ramsey-Stewart[29] evaluated 153 consecutive applicants for bariatric surgery. Thirty patients (19.6%) were not cleared, many for multiple reasons. The most frequent reason for rejection was the presence of significant marital, family, or other stress or lack of support for surgery from family (N = 24). In DSM-III terms, Gertler and Ramsey-Stewart classified these factors as "conditions not attributable to a mental disorder that are a focus of attention and treatment."[30(p331)]

Sarwer and colleagues[31] evaluated 90 surgical candidates. Slightly less than two thirds (64.4%) received initial clearance. Approximately one third (32.2%) were referred for psychiatric and/or nutritional counseling and 3 patients (3.3%) were not recommended for surgery. The specific reasons the patients were not cleared for surgery were not described. Other studies have likewise reported that a significant minority of surgical candidates were not cleared for psychiatric reasons.[25–28,32]

No study of presurgical psychiatric evaluations has examined the reliability of the decision to clear or not clear candidates for surgery. Because there is variability in what mental health professionals consider contraindications for surgery, it is important to determine the reliability of these judgments.

A second limitation of previous reports of presurgical psychiatric clearance for bariatric surgery is the lack of an adequate description of the reasons for postponing surgery. Only Gertler and Ramsey-Stewart[29] detailed the reasons for rejection. Of note, in their study the presence of an eating disorder or emotion-based overeating to regulate dysphoric affect was not one of the listed reasons that precluded surgery, whereas this was the second most frequent reason listed by the clinicians surveyed by Fabricatore et al.[26]

Finally, the sample sizes of previous studies were relatively modest. All sample sizes were less than 200. Relatively infrequent reasons for precluding surgery may not be detected in small-scale studies.

In the Rhode Island Bariatric Surgery (RIBS) project, candidates for bariatric surgery are evaluated by highly trained interviewers who administer comprehensive, semistructured interviews for psychiatric disorders and eating history. The goal of the present report is 3-fold. First, we examined the reliability of decisions to clear candidates for surgery. Second, in a large cohort of patients, we determined the percentage of candidates who were not cleared for surgery. And third, we detailed the reasons candidates were not cleared for surgery.

METHOD

During the past 10 years, we have been conducting the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project in which we have integrated comprehensive research assessments into a general clinical outpatient psychiatric practice.[33] In 2003 we were approached by surgeons in the community who asked if we were interested in conducting psychiatric evaluations of candidates for bariatric surgery. We suggested developing an integrated clinical-research program similar to the one already embedded in our clinical practice, the core of which would be semistructured diagnostic interviews for DSM-IV Axis I and Axis II disorders supplemented by a module specific to this population. The Rhode Island Hospital institutional review committee approved the research protocol, and all patients provided informed, written consent.

We drafted a semistructured bariatric module to evaluate patients' eating and dieting history, reasons for having the surgery, medical and psychosocial consequences of obesity, comprehension of the potential risks and complications of the surgery, expectations of surgical success, potential obstacles in achieving success, recent stress, and level of social support. Over the course of 8 months, we evaluated more than 100 surgical candidates while pilot testing and refining the bariatric surgery module. We also reviewed the literature on psychiatric factors considered to be possible contraindications to surgery, and discussed among ourselves the types of factors that would warrant delaying or recommending against surgery.

After we developed and pilot tested our bariatric module on more than 100 patients, the RIBS project officially began in July 2004. The present report is based on the first 500 candidates evaluated from July 2004 until July 2006. During this time there were 3 surgeons in Rhode Island who performed bariatric surgery. Over time, as the surgeons became familiar with our work, they increasingly directed patients to us for the psychiatric evaluation. During the second year of the study, all surgical candidates were referred to us for the presurgical psychiatric evaluation, including patients currently receiving psychiatric treatment elsewhere. There was no difference in clearance rates during the first and second years of the study. Thus, the sample is representative of patients in Rhode Island seeking bariatric surgery. The surgeons referred all surgical candidates for a psychiatric evaluation and did not prescreen the patients. Thus, the calculation of the percentage of patients who were psychiatrically cleared was not biased by the exclusion of some patients after their initial presentation in the surgeon's office.

Patients were interviewed by a diagnostic rater who administered a modified version of the Structured Clinical Interview for DSM-IV,[34] Structured Interview for DSM-IV Personality,[35] and the Rhode Island Bariatric Surgery Interview (available from the authors upon request). The diagnostic raters were highly trained and monitored throughout the project to minimize rater drift. Diagnostic raters included Ph.D.-level psychologists and research assistants. Research assistants received 3 to 4 months of training during which they observed at least 20 interviews, and they were observed and supervised in their administration of more than 20 evaluations. Psychologists only observed 5 interviews; however, they, too, were observed and supervised in their administration of 15 to 20 evaluations.

After the evaluation, the interviewer prepared a comprehensive report, which was given to a psychiatrist to review. The interviewer prepared a fresh report specific to each patient, and did not check off boxes to fill in a template. The psychiatrist concluded the evaluation by reviewing the history with the patient and expanding and clarifying areas as clinically warranted. This evaluation was usually done on the same day as the first interview. The psychiatrist made the final determination whether the patient was cleared for surgery. The psychiatrist indicated on the Surgery Clearance Form whether the patient was cleared for surgery, and if not, the reason(s) for not clearing the patient. The form listed 8 reasons for not clearing a patient (e.g., overeating to cope with emotional distress, eating disorder, uncontrolled psychopathology, current life stressors, insufficient history of dieting, unrealistic expectations regarding surgery, lack of social support, and lack of understanding of surgical risks), as well as space for other, unlisted reasons. Insufficient history of dieting referred to lack of prior attempts to lose weight by dieting, or only 1 such effort. More than 1 reason for not clearing the candidate could be checked off.

Table 1. Demographic Characteristics of 500 Presurgical Candidates for Bariatric Surgery

Characteristic	Value
Gender, N (%)	
Female	407 (81.4)
Male	93 (18.6)
Education, N (%)	
Less than high school	29 (5.8)
Graduated from high school	298 (59.6)
Graduated from 4-year college	173 (34.6)
Marital status, N (%)	
Married	266 (53.2)
Living with someone	17 (3.4)
Widowed	10 (2.0)
Separated	10 (2.0)
Divorced	87 (17.4)
Never married	110 (22.0)
Race, N (%)	
White	415 (83.0)
Black	36 (7.2)
Hispanic	29 (5.8)
Asian American	2 (0.4)
Portuguese	14 (2.8)
Other	4 (0.8)
Age, mean (SD), y	41.5 (10.1)
Body mass index, mean (SD)	
Female	47.7 (7.6)
Male	51.1 (8.7)

Reliability for determining clearance was evaluated in 73 patients. A psychiatrist who did not evaluate the patient independently reviewed the report prepared by the initial interviewer and completed the Surgery Clearance Form blind to the original decision. We thought that this method of determining reliability was more stringent than having the second psychiatrist observe the first psychiatrist's interview because the direction and content of the interview could suggest whether the interviewer was going to clear the patient for surgery. We computed the κ statistic to evaluate reliability because it corrects for chance agreement between raters.[36]

RESULTS

The data in Table 1 show the demographic characteristics of the sample. The majority of the subjects were white, female, married or never married, and graduated from high school. The mean age of the sample was 41.5 years (SD = 10.1).

The 73 patients in the reliability study were not different from the remaining patients in their demographic characteristics or likelihood of being cleared for surgery. In the reliability sample 17 patients (23.3%) were not cleared for surgery. The κ coefficient of reliability of determining surgical clearance was 0.83. According to the guidelines of Landis and Koch,[36] reliability was excellent.

Among the total sample, 18.4% (N = 92) were not cleared for surgery. For the majority of patients who were

not cleared (64.1%, N = 59), the psychiatrists listed 1 reason on the Surgery Clearance Form. For 26 patients (28.3%), 2 reasons were listed, and for 7 patients (7.6%), 3 reasons were listed. Table 2 lists the reasons patients were not cleared for surgery. The most common reasons for the negative recommendation were overeating to cope with stress or emotional distress, current eating disorder, uncontrolled psychopathology at the time of the evaluation, and the presence of significant life stressors. The reasons for not clearing a patient when the "Other" category was checked off were night eating syndrome along with emotional eating (N = 1), lack of compliance with current outpatient psychiatric treatment (N = 1), low motivation to make behavioral changes (N = 2), compulsive eating that did not meet criteria for an eating disorder (N = 1), alcohol dependence (N = 1), regained weight after prior bariatric surgery and unable to articulate the reason for the weight gain including denial of excessive consumption (N = 1), and need to resume psychiatric treatment for ongoing psychopathology (N = 1).

Almost all of the patients with uncontrolled psychopathology (N = 17, 94.4%) had a mood disorder (13 had major depressive disorder, 1 had bipolar disorder, 1 had schizoaffective disorder, and 2 had dysthymic disorder). All but 2 of these 17 patients also had a comorbid anxiety, impulse control, personality, or eating disorder. Eleven (61.1%) of the 18 patients who were not cleared because of uncontrolled psychopathology were diagnosed with 3 or more disorders.

The 2 most common eating disorder diagnoses were binge-eating disorder (N = 15) and eating disorder not otherwise specified (N = 7). One patient was diagnosed with bulimia nervosa. Two patients reported disordered eating behavior that was not diagnosed as an eating disorder by the interviewer who administered the SCID, but was nonetheless checked off as an eating disorder on the Surgery Clearance Form.

Only 1 patient was excluded for a lack of sufficient understanding of the potential risks of surgery.

Table 2. Reasons for Excluding Candidates From Bariatric Surgery (N = 92)[a]

Reason	N	%
Overeating to cope with stress or emotional distress	57	62.0
Eating disorder	25	27.2
Uncontrolled psychopathology	18	19.6
Current significant life stressors	10	10.9
Insufficient effort at formal diet programs	7	7.6
Unrealistic expectation of change	2	2.2
Lack of social support to cope with postsurgical transition	4	4.3
Poor understanding or appreciation of potential risks for surgery	1	1.1
Other	8	8.7

[a]More than 1 reason could be checked.

DISCUSSION

Surveys of surgeons and mental health professionals have found variability in opinion regarding what psychosocial problems warrant denial, at least temporarily, of clearance for bariatric surgery.[25,26] It was therefore reassuring that we found high reliability of decision making, thereby indicating that, at least within the same clinical setting, clinicians can independently agree on who should or should not be cleared for surgery. It would be of interest to determine the level of reliability among clinicians working at different bariatric surgery programs. It is feasible to use the methodology of the present study, making ratings after reading detailed reports, to determine reliability in other settings, and across settings.

Consistent with the results of prior reports we found that a substantial minority of candidates for bariatric surgery did not receive psychiatric clearance. Powers et al.[27] noted that slightly more than one quarter of the candidates for surgery were not cleared, although the exact percentage due to psychosocial reasons was not specified. Nor did they elucidate the specific reasons patients were not cleared. More than a third of the patients evaluated by Sarwer et al.[31] were not cleared, although they, too, did not identify the precise reasons for not clearing patients. Approximately 20% of the surgical candidates were not cleared in Gertler and Ramsey-Stewart's study.[29] They found that psychosocial stress and lack of social support were the most frequent reasons for not clearing patients. The presence of an eating disorder or emotion-based overeating were not listed among the reasons for postponing surgery, whereas in the present study these were the 2 most common reasons for not receiving psychiatric clearance. The different eras during which the studies were conducted may have contributed to the different results. Gertler and Ramsey-Stewart's study was conducted during the early 1980s, before the development of the criteria for binge-eating disorder and before the publication of studies finding an association between eating disorders and surgical outcome.[37–41] To be sure, there are also studies failing to find an association between eating disorders and surgical outcome.[42–44] There is current debate in the field whether the presence of disordered eating should postpone surgery until the eating behavior is addressed in treatment.

The present study focused on the reliability of presurgical psychiatric evaluations and on determining how many patients were excluded for psychiatric reasons. There are limited data on the prognostic validity of presurgical psychopathology. Consequently, the psychiatrists relied on their clinical decision making for delaying patients from having surgery. Clearly this is an area that warrants study so that these decisions could be more empirically based.

Almost all patients who were not cleared were referred for psychiatric treatment. Patients who were not cleared

because of overeating in response to stress were referred to a psychologist to learn alternative methods of coping with emotional distress. All surgical candidates, as part of the routine preoperative procedure, met with a nutritionist at least once for nutritional counseling. Thus, initial screen failure was not tantamount to prohibiting the candidate from having the surgery. In a future study we will determine how many of these individuals accepted psychiatric referral and were ultimately cleared for surgery. It will also be important to determine how their outcome from surgery compares with the outcome of individuals who received initial clearance for surgery.

Limitations of the study are that it was conducted in a single site and that most patients were female and white. A strength of the study is the large sample size, approximately 3 times larger than the next largest study[27] that examined the percentage of patients excluded from bariatric surgery for psychiatric reasons. Despite the relatively large sample, it was still not large enough to provide sufficient power to examine the correlates of screening decisions such as demographic factors because the sample sizes would sometimes get small. In the future, after we have obtained a sufficiently large sample, we will examine the influence of gender, race, and age on the frequency and reasons for not clearing surgical candidates. Other strengths of the study are the use of multiple interviewers and psychiatrists rather than a single clinician and the use of reliable and valid standardized interviews. Also, since beginning our integrated clinical-research service, all of the surgeons in the state have increasingly referred almost all of the surgical candidates to us. Consequently, selection biases possibly attributable to working in a tertiary care center and thus seeing more complicated patients are less likely. Likewise, the surgeons required patients who were already receiving psychiatric care to be evaluated by us, and this reduced another potential referral bias.

In conclusion, the decision to clear candidates for bariatric surgery can be made with high reliability. Approximately 1 in 5 surgical candidates did not pass the initial screening, usually because of current eating pathology, other forms of psychopathology, or difficulty coping with current life stressors.

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