




The Forgotten Element in the Resumption of Elective Bariatric Surgery During the COVID-19 Pandemic: the Patient Consent!

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Abstract

Safety comes first, and the sympathy with the postponed bariatric patients should not come at the expense of the proper standard of care. This study presents a survey of 266 bariatric candidates who were rescheduled for bariatric surgery after postponement during the COVID-19 pandemic. The aim was to assess their knowledge and expectations regarding bariatric surgery and the risk of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. A total of 233 (87.6%) candidates believed that they were prone to a higher risk of severe SARS-CoV-2 infection, and 24.4% of them believed that bariatric surgery, during the pandemic, would improve their immunity. A total of 27.8% of candidates attributed the responsibility regarding potential perioperative SARS-CoV-2 infection to the medical personnel, and 10.7% of them believed it to be the surgeon's responsibility.

Keywords COVID-19 pandemic · Coronavirus · Bariatric resumption · Informed consent · Cancellation

Introduction

Health policy-makers and planners recommended postponement of elective surgeries, including bariatric surgeries, during the peak of the COVID-19 pandemic. The aim is to reduce the burden on medical resources and to reduce the risk of hospital-acquired infection. The available literature addressed many aspects of bariatric practice during the COVID-19 pandemic. Preoperative preparation and postoperative follow-up could continue, to a great extent, through the utility of telemedicine, in-house exercise, online support groups, online platforms, and electronic applications [1]. There is no debate regarding the importance of timely management of bariatric emergencies as staple line leakage, marginal ulcers, and internal herniation [1, 2]. More recently, recommendations to deal with bariatric surgical resumptions were released. These recommendations included a risk-stratified triaging system to

prioritize tiers of bariatric patients. They also provided instructions for infection control to protect the patients and medical teams [2–4].

To our knowledge, there is no mention of the bariatric candidates' conceptualization of bariatric practice during the COVID-19 pandemic. Is there a need for a different approach during patient counseling? Should the patient consent be modified in the era of the COVID-19 pandemic? The present study aims to help in answering these questions through an assessment of patients' concepts regarding bariatric surgery resumption after the peak of the COVID-19 pandemic.

Methods

This is a cross-sectional survey of morbidly obese patients (body mass index $> 40 \text{ kg/m}^2$ or $> 35 \text{ kg/m}^2$ with associated comorbidities) who were scheduled for bariatric surgery and were postponed due to the COVID-19 pandemic. Candidates for bariatric surgery were rescheduled for bariatric surgery after 3 months. They were informed that this new appointment is preliminary, and it can be postponed again due to outbreak exacerbation or further waves of the COVID-19 pandemic. The survey was performed using a structured questionnaire provided in the patients' language. The survey was conducted through online survey software (SurveyMonkey), allowing a single response from the device. The link to the survey was

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sent individually to each patient. The aim of the survey was explained to all patients. All patients were informed that their participation was voluntary, and the collected data were confidential and anonymous.

The questionnaire is developed based on clinical experience to assess the patient expectation regarding the risk of infection during the planned surgery. A pilot test of the questionnaire was performed with five patients to assess the reliability and inter-rater variations. Ambiguous questions were excluded and rephrased. The final form of the questionnaire consisted of 10 questions, two questions on patient age and sex. The first four questions assessed the patient personal belief and behavior regarding the COVID-19 pandemic. The following four questions assessed the patient opinion regarding bariatric surgery and the risk of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. Summary statistics were presented as percentages for categorical variables and means with standard deviations for continuous variables. Correlation between answers was tested using the Chi-square test.

Results

A total of 268 bariatric candidates were asked to participate in the survey, and two of them refused to participate. The survey included a total of 266 bariatric candidates who were rescheduled for bariatric surgery after initial postponement during the COVID-19 pandemic. A complete response was obtained in 263 bariatric candidates. The three incomplete questionnaires were lacking the answer to the last question regarding who is responsible if a patient acquired the SARS-CoV-2 infection during the perioperative period. The mean age of the participants was 39.5 ± 21.7 years, and 198 (74.4%) of them were females. Questions and answers to the questionnaire are summarized in (Table 1). Adoption of conspiracy theories regarding the COVID-19 pandemic was not significantly associated with the abandonment of protective measures ($P = 0.06$) or thinking that healthcare professionals are responsible for hospital-acquired infection even with optimum infection control policy ($P = 0.3$).

Discussion

Bariatric surgeons have no experience with a similar situation to surgical practice during the COVID-19 pandemic. Sharing experiences, however small it may seem, will help to have a more comprehensive view. Bariatric recommendations and protocols should be dynamic in response to the increasing knowledge regarding affecting perioperative variables. Surgeons should not deal with bariatric candidates as they

both have the standard background knowledge regarding the SARS-CoV-2 infection.

In this series, 17.67% of patients conceived the COVID-19 pandemic as an illusion and a political conspiracy theory. Although this may seem non-representative of the public attitude, the public perception of global health problems is usually not predictable. In a recent survey that included about 800 participants, 20% of the participants believed in at least one conspiracy theory regarding the Zika virus [5]. Another survey examined the endorsement of conspiracy beliefs regarding HIV/AIDS in 500 participants, and about 60% of the participants had at least one conspiracy belief regarding HIV/AIDS [6]. Regarding the COVID-19 pandemic, a survey that included 3019 adult participants found that 3–19% of them hold one or more of the conspiracy theories regarding the pandemic (3% believed that the virus was not real, 14–20% believed that scientists and media exaggerate seriousness for political reasons, and 10% believed that 5G technology is spreading the virus) [7]. Patient knowledge plays an important role in his behavior, and a lot is still unknown regarding the public knowledge and attitude towards the COVID-19 pandemic. Given these findings, bariatric teams need to make sure that bariatric candidates are willing to follow the protective measures based on a common background knowledge regarding the etiology and transmission of the SARS-CoV-2 infection.

The fulfillment of patients' expectations is a pivotal component of patients' satisfaction. Based on bariatric practice before the COVID-19 pandemic, patients are expecting more personal contact with members of the bariatric team, frequent follow-up visits, and timely assessment of any deviations from the ordinary postoperative course. Changes in bariatric practice during the COVID-19 pandemic should be in parallel to changes in the process of preoperative patient education. Informed consent is not just a piece of paper, but it is a process of knowledge-based patient permission [8]. Setting realistic expectations during patient counseling is essential for informed consent and patient satisfaction; otherwise, we will replace "waiting" candidates with "angry" postoperative patients.

Obesity is recognized as a risk factor for severe SARS-CoV-2 infection and higher mortality rates [1]. In this series, 87.6% of bariatric candidates believed that they were prone to a higher risk of severe forms of infection, and 24.4% of candidates believed that bariatric surgery would improve their immunity during the COVID-19 pandemic. It should be equally known that patients who acquire the infection during the perioperative period are also more prone to severe infection and higher mortality rates. A recent international multicenter study reported a 30-day mortality rate of 19.1% in patients who underwent elective surgery and had SARS-CoV-2 infection within 7 days before or 30 days after surgery [9]. Also, adequate hydration, which is crucial for the

Table 1 Summary of the answers to the questionnaire

Age	Total response: 266 39.5 ± 21.7 years
Sex	Total response: 266 Females: 198 (74.4%) Males: 68 (25.6%)
What is your opinion regarding the COVID-19 pandemic?	Total response: 266 A fact: 208 (78.2%) Illusion and political conspiracy: 47 (17.7%) Others: 11 (4.1%)
Did you commit to the quarantine rules?	Total response: 266 Yes: 225 (84.95%) No: 41 (15.41%)
Did you follow the personal protective measure as wearing the face mask outside the home?	Total response: 266 Yes: 185 (69.6%) No: 14 (5.3%) Sometimes: 67 (25.2%)
Did you experience any flu-like symptoms during the COVID-pandemic?	Total response: 266 Yes: 63 (23.7%) No: 203 (76.3%)
Are obese patients at higher risk for COVID-19 infection and its complications?	Total response: 266 Yes: 233 (87.6%) No: 33 (12.4%)
If you agreed to the previous question, what is the cause of this risk?	Total response: 233 Lack of immunity: 47 (20.2%) Associated chronic illness: 51 (21.9%) Both: 135 (57.9%)
Are you with performing bariatric surgery to enhance the immunity or postponing surgery to reduce the infection risk?	Total response: 266 Perform surgery: 65 (24.4%) Postpone surgery: 201 (75.6%)
If the surgery was performed taking all preventive measures and the patient was diagnosed with COVID-19 infection within one week after surgery, who has the main responsibility?	Total response: 263 The surgeon: 28 (10.7%) The patient: 12 (4.6%) The hospital: 45 (17.1%) No one: 178 (67.7%)

prevention and management of SARS-CoV-2 infection, is not usually easy to achieve in the early postoperative period after bariatric surgery.

Hospital-acquired infection is considered a breach in the standard of care. It was issued as a medical malpractice claim against bariatric surgeons [10]. Surgeons should clarify the possibility of SARS-CoV-2 infection even with the adoption of an optimum infection control policy. The information regarding viral transmission and protective measures is still evolving. Patients can also have a community-acquired infection from asymptomatic carriers in the family during the early postoperative period. In a recent report on four bariatric patients who were diagnosed with SARS-CoV-2 infection postoperatively, the authors could not

confirm the source of infection to be hospital-acquired or hidden preoperative community-acquired infection in three patients [11]. In this series, 27.8% of patients attributed the responsibility regarding potential perioperative SARS-CoV-2 infection to the medical personnel, and 10.7% of them believed it to be the surgeon's responsibility.

Management of bariatric complications as leakage and thromboembolic complications is resource-demanding [11]. It requires serial laboratory and imaging investigations, prolonged hospitalization, multiple readmissions, and frequent follow-up visits. Recommendations based on the Chinese experience provoked bariatric surgery to be performed in the nearest bariatric program to avoid traveling. It also recommended the management of

complications, if any, in the local hospital [4]. It is uncommon for bariatric candidates to choose their surgeons based on geographical distribution, and far beyond expectations that they accept to have their bariatric complications managed away from the primary surgeon.

Moreover, there is an overlap between the manifestations of bariatric complications and SARS-CoV-2 infection. Bariatric complications may present with dyspnea, fever, relative lymphopenia, and pulmonary insult on computerized tomography of the chest. On the other hand, SARS-CoV-2 infection may present mainly with gastrointestinal symptoms as nausea, vomiting, abdominal pain, and diarrhea [12]. Differentiation between both conditions in the early postoperative period requires laboratory investigations, chest imaging, frequent assessment, and sometimes hospitalizations. There is also no guarantee that bariatric complications and SARS-CoV-2 infections do not cooccur in the same patient. Surgeons should have a clear plan for regular follow-up and management of complications in different situations, and this plan has to be deliberately explained to the patient.

This study is limited by the small sample size in a single private bariatric center, which is not representative of the bariatric community worldwide. However, the sample size is sufficient to convey the message of the importance of modification in the process of informed consent. Inadequate patient education and documentation may lead to medical litigations based on various allegations, including miscommunication, misguided motivation for surgery, failure to document, inadequate informed consent, an inappropriate delegation of responsibility, patient abandonment, failure to admit to the hospital, and inadequate follow-up support [8].

In conclusion, realistic expectations set during patient counseling are mandatory for patient satisfaction. The role of bariatric teams in surgical resumption during the COVID-19 pandemic is more than patient triage and adoption of the optimum infection control policy. Bariatric teams need to ensure that candidates for surgery share the required knowledge regarding the methods of transmission of SARS-CoV-2 infection and are willing to follow the protective measures. The relationship between obesity, surgical trauma, and SARS-CoV-2 infection should be objectively clarified to the patient. Bariatric candidates should be prospectively informed of a clear plan for regular follow-up and management of complications. These data should be added to the original bariatric consent. Written informed consent, with proper documentation, should be tailored according to the individual circumstances, including the state legal regulations, bariatric team potentials, and patient health.

Compliance with Ethical Standards

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

Ethical Approval Statement This is a survey of bariatric candidates rescheduled for surgery in a private center for their knowledge and attitude regarding bariatric surgery during the COVID-19 pandemic. The survey was conducted as a routine practice before the resumption of bariatric surgery. Ethical approval is not applicable.

Informed Consent Statement All candidates voluntarily participated and were informed of the nature and aim of the survey. Answers to questionnaires were anonymous and confidential.

References

1. Yeo C, Ahmed S, Oo AM, et al. COVID-19 and obesity—the management of pre- and post-bariatric patients amidst the COVID-19 pandemic. *Obes Surg.* 2020;30:1–3. <https://doi.org/10.1007/s11695-020-04670-6>.
2. Daigle CR, Augustin T, Wilson R, et al. A structured approach for safely reintroducing bariatric surgery in a COVID-19 environment. *Obes Surg.* 2020;30:1–6. <https://doi.org/10.1007/s11695-020-04733-8>.
3. Yang W, Wang C, Shikora S, et al. Recommendations for metabolic and bariatric surgery during the COVID-19 pandemic from IFSO. *Obes Surg.* 2020;30(6):2071–3. <https://doi.org/10.1007/s11695-020-04578-1>.
4. Dong Z, Zhang P, Zhu J, et al. Recommendations to manage patients for bariatric surgery in the COVID-19 pandemic: experience from China. *Obes Surg.* 2020:1–4. <https://doi.org/10.1007/s11695-020-04741-8>.
5. Klofstad CA, Uscinski JE, Connolly JM, et al. What drives people to believe in Zika conspiracy theories? *Palgrave Commun.* 2019;5:36. <https://doi.org/10.1057/s41599-019-0243-8>.
6. Bogart LM, Thorburn S. Are HIV/AIDS conspiracy beliefs a barrier to HIV prevention among African Americans? *J Acquir Immune Defic Syndr.* 2005;38(2):213–8.
7. Miller JM. Do COVID-19 conspiracy theory beliefs form a monological belief system? *Can J Polit Sci.* 2020;21:1–8.
8. McCauley KM. Medicolegal issues: the pitfalls and pratfalls of the bariatric surgery practice. In: Brethauer SA, Schauer PR, Schirmer BD, editors. *Minimally invasive bariatric surgery*. New York Heidelberg Dordrecht London: Springer; 2015. p. 513–21.
9. COVIDSurg Collaborative. Mortality and pulmonary complications in patients undergoing surgery with perioperative SARS-CoV-2 infection: an international cohort study. *Lancet.* 2020;S0140–6736(20):31182–X. [https://doi.org/10.1016/S0140-6736\(20\)31182-X](https://doi.org/10.1016/S0140-6736(20)31182-X).
10. Kassir R, Lointier P, Papastathi-Boureau C, et al. Medicolegal analysis of 81 malpractice claims against bariatric surgeons in France. *Obes Surg.* 2020;30(5):1726–35. <https://doi.org/10.1007/s11695-020-04389-4>.
11. Aminian A, Kermansaravi M, Azizi S, et al. Bariatric surgical practice during the initial phase of COVID-19 outbreak. *Obes Surg.* 2020;30:1–4. <https://doi.org/10.1007/s11695-020-04617-x>.
12. Parasa S, Desai M, Chandrasekar VT, et al. Prevalence of gastrointestinal symptoms and fecal viral shedding in patients with coronavirus disease 2019: a systematic review and meta-analysis. *JAMA Netw Open.* 2020;3(6):e2011335. <https://doi.org/10.1001/jamanetworkopen.2020.11335>.

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