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The effects of COVID-19 pandemic on elective post-bariatric surgery waiting list: a single Plastic Surgery Center investigation

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Abstract. – OBJECTIVE: After massive weight loss, patients that meet specific criteria can be inserted in an ad-hoc post-bariatric surgery list in order to be subjected to body contouring procedures. During COVID-19 pandemic, the Italian National Health System has been overwhelmed by the continue load of life-threatening patients that needed medical assistance. Plastic surgery practice enormously scaled back during this period and this fact greatly affected elective procedures waiting lists. The aim of our study is to analyze how the lockdown and its related sanitary policies affected post-bariatric patients' behaviors towards the delay of their procedure.

PATIENTS AND METHODS: A 7-item questionnaire was administered to all patients. Change in the desire to be subjected to body contouring procedures was recorded. Smoking status, level of training during quarantine and psychological co-morbidities were also evaluated.

RESULTS: 124 patients completed the questionnaire. Data analysis showed that none of them encountered a decrease of the desire to be subjected to post-bariatric plastic surgery procedures.

CONCLUSIONS: The present study showed that all the patients in the waiting list did not modify their interest in being subjected to post-bariatric surgery procedures, even though the waiting time increased.

Key Words:
COVID-19, Post-bariatric surgery, Plastic surgery, Body contouring, Pandemic.

Introduction

In Italy, between 2013 and 2018 more than 40.000 bariatric surgery procedures were performed[1]. It is widely recognized that bariatric surgeries can control weight efficiently, allowing high rates of weight loss[2]. It has also been shown that these procedures are able to induce more weight loss than pharmacological and behavioral therapies and permit its maintenance over time, reporting optimal cost-effectiveness when compared to diet alone[3].

Even so, about 30% of patients could report insufficient weight loss and approximately 20-25% of the weight loss is likely to be regained by most of the patients over the years[4]. It is highly accepted that weight loss in the post-operative period is influenced by psychological, behavioral, neuronal and hormonal factors[5].

The aim of our study is to analyze how the Italian lockdown during COVID-19 pandemic and its related sanitary policies affected post-bariatric patients' behaviors towards the delay of their procedure, investigating a possible modification of the desire to be subjected to plastic surgery procedures, considering the inevitable increase in waiting time.

Patients and Methods

The study comprehended patients that are currently in the post-bariatric waiting list of Plastic Surgery Unit at Policlinico Umberto I University Hospital, Rome, Italy. A 7-item questionnaire was administered by e-mail to all patients (Table I). Patients' data were recorded and analyzed, including age, sex, weight, Body Mass Index (BMI) and weight loss since the bariatric surgery procedure. The date of entry in the waiting list was also recorded, excluding from the study patients that have been in the waiting list for less than 3 months. Patients were included if they filled in the entire questionnaire and excluded if

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Table I. 7-item questionnaire.

1.	Has your desire to be subjected to post bariatric plastic surgery procedures increased, decreased or remained unchanged during this lockdown period?
2.	Have you started practicing physical activity at home or, alternatively, have you continued to practice it even if the gyms are closed?
3.	Have you smoked during quarantine? If yes, did you smoke before quarantine? If no, have you ever smoked?
4.	Have you changed your diet during this quarantine with a consequent increase in body weight? If yes, how many Kgs did you gain?
5.	Did this period of home quarantine made you more prone to pay more attention to your body and your physical appearance?
6.	Has your perception of functional and/or aesthetic discomfort resulting from bariatric surgery outcomes (excess of skin, intertrigo, etc.) increased?
7.	Have your expectations for the outcome of plastic surgery grown?

they either did not answer or refused to answer to it. The eventual change in patients' lifestyle during the lockdown was also investigated, analyzing variations, occurred between 09/03/2020 and 30/04/2020, in physical activity, weight, BMI and eventual resumption of smoking habit.

Results

A total of 178 post-bariatric patients were asked to complete a questionnaire designed by the surgical team, 124 (69.7%) completed the 7-item questionnaire, 31 males and 93 females. Mean age of patients was 41 years (range 23-56 years). Data analysis showed that none of the patients encountered a decrease of the desire to be subjected to post-bariatric plastic surgery procedures. 72 patients (58.1%) reported to train daily at the gym, but only 28 (22.5%) started a home training program during the lockdown; among patients that did not frequent a gym regularly, 11 patients (8.9%) started a home training program. 56 patients (45.2%) were currently smoking at evaluation, 51 (41.1%) smoked before quarantine and 5 patients (4%) started this habit during the lockdown. Among the 20 ex-smokers, 14 (11.3%) resumed smoking after quitting before bariatric surgery and only 6 (4.8%) maintained their smoking status. 9 patients (7.3%) modified their dietary consumption with an increase of their weight during the last 2 months, obtaining a consequent increase in BMI, which in 5 patients was close to 30 (the limit value to be inserted into the post-bariatric list). 46 patients reported to pay more attention to their physical appearance than usual and 28 patients have increased their functional and aesthetic discomfort resulted from bariatric surgery outcomes. 13 patients reported to have increased their expectations for the outcome of their plastic surgery procedures.

Discussion

After massive weight loss, body contouring procedures can be charged on the Italian NHS only if patients present a BMI <30 kg/m^2 and a stable weight for 6-12 months[6].

In our center, as in the rest of Italy, the waiting list can be very long, usually requiring patients to wait more than 12-18 months to undergo the scheduled procedure. During COVID-19 emergency[7], the Italian National Health System has been overwhelmed by the continue load of life-threatening patients that needed medical assistance, from normal care to intensive care. Plastic surgery activity in COVID hospitals has consisted of traumatic surgery and undeferrable oncologic surgery. This fact enormously affected elective procedures waiting lists and we estimated that our lists will be stretched with a possible increase of 8-12 months in waiting time.

On the other hand, it was demonstrated that containment measures such as self-isolation and social distancing have had a strong impact on daily life and might have negatively affected psychological well-being[8]. Psychological individual differences in post-bariatric patients become important for weight loss after the first year[9]. For this reason, the necessity of a continue psychosocial and nutritional counseling support to the post-bariatric population has been demonstrated, particularly when, once patients have reached their weight loss nadir, are more vulnerable to weight regain[10].

The present study showed that all the patients in the waiting list did not modify their interest in being subjected to post-bariatric surgery procedures, even though the waiting time increased. Furthermore, we detected two main behavioral patterns: patients that started a training program during the lockdown, that could be more motivated in starting the reconstructive pathway, with probable lower complication rates obtained by maintaining healthy lifestyle and habits in the post-operative period; conversely, we reported another group of patients that did not activate a home training program or resumed bad habits. Supposedly these patients could be less motivated to undergo post-bariatric plastic surgery, maintain a good lifestyle and follow surgeon indications, thus requiring additional psychological support. Clinical disorders such as depression and anxiety may persist and increase during the 18-24 months after bariatric surgery, leading to difficulties in maintaining weight[11]. For this reason, many cases may present persistent obesity or even substitution with other self-destructive behaviors, such as anorexia nervosa, bulimia or substance abuse[12]. More studies are required to investigate if such behaviors derive from conditions existing before surgery or relates more to the discomfort from excess skin after pronounced weight loss. Further studies are necessary to analyze psychological profiles of post-bariatric patients and we believe that this study could represent a starting point for further larger studies at our institution.

Conclusions

The present study showed that all the patients in the waiting list did not modify their interest in being subjected to post-bariatric surgery procedures, even though the waiting time increased.

Some patients are more vulnerable to regain weight due to their psychological attitude and should be followed more strictly. Precise risk factors for weight regain should be investigated.

Conflict of Interest

The Authors declare that they have no conflict of interests.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Institutional and/or National Research Committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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