



Obesity's Impact on Gynaecological Surgery

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INTRODUCTION

It has been suggested that there is a global obesity crisis. Between 1975 and 2010, the global prevalence of obesity roughly tripled. Between 2010 and 2016, around 13% of the world's adult population was classified as obese. According to recent figures, 26 percent in 2016, % of individuals in England were categorised as obese, since 1993, there has been a 15% increase. Despite the prevalence of adult obesity in the United Kingdom, in 2010, NHS hospitals had 617,000 obesity-related patients admissions in 2016/17, an increase of 18% over the previous years. Overweight and obesity are defined by the World Health Organization (WHO) as abnormal or excessive fat buildup that may damage health, and the Body Mass Index (BMI) is used to classify the degree of obesity. BMI is computed by dividing a person's weight in kilogrammes by their height in metres squared (kg/m²).

DESCRIPTION

Overweight and Obesity are defined as having a BMI of 25 kg/m² and 30 kg/m², respectively, with the latter further subdivided into Obesity I (BMI 30 to 35 kg/m²), Obesity II (BMI 35 to 40 kg/m²), and Obesity III (BMI 40 kg/m²). Obesity and gynaecological pathology are well-established connections, and women frequently seek surgical treatment. This study examines methods for improving preoperative, intraoperative, and postoperative counselling, assessment, and care of obese women undergoing gynaecological surgery [1].

Obtaining informed permission is one of the most critical perioperative factors. Gynaecological surgery is frequently performed for benign pathology, and non-surgical therapy options should be favoured wherever possible. A weight loss period may reduce anaesthesia and surgical risk, as well as enhance preoperative gynaecological discomfort and postoperative surgical outcomes. Prior to scheduled elective

gynaecological surgery, patients may require dietetic referral to optimise nutrition and weight loss, as well as bariatric surgery. Obesity can be associated with a number of comorbidities, and women frequently benefit from multidisciplinary input to evaluate their particular risks as well as optimise their health. A preoperative anaesthetic review could help with counselling and optimization. Obesity significantly increases the risk of surgical infections, wound complications, and venous thromboembolism. Obese patients have a higher rate of conversion to laparotomy due to inadequate access or problems with ventilation. Difficulty arranging the obese patient on the operating table increases the risk of peripheral nerve injury and pressure sore formation, particularly when employing the lithotomy position [2,3]. Antibiotics, thromboprophylaxis, and cautious placement on adequately sized operating tables can reduce these risks.

Obese individuals should preferably be evaluated in a comprehensive preoperative assessment clinic, where those at increased risk can be identified. While an initial triage examination can be conducted, anaesthesia advice should be readily available due to the possible difficulty with intravenous access, airway and breathing maintenance, as well as post-operative analgesic and antiemetic control. It is critical to keep an up-to-date BMI estimate in the hospital records since delays can occur prior to surgery admission and the BMI can vary. Modifiable risks can be recognised and managed by taking a thorough history, performing an examination, and conducting relevant investigations. While the extent of testing necessary varies by patient, the examinations should focus on finding the comorbidities commonly linked with obesity, such as cardiac, respiratory, and metabolic disorders.

Obese persons are more likely to develop cardiac disorders such as hypertension, hyperlipidaemia, coronary artery disease, and heart failure [4]. Obese women's increased metabolic demands increase oxygen consumption, cardiac output, preload and peripheral vascular resistance, and stroke

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volume. This combination increases the risk of hypertension and cardiomegaly. A baseline ECG and blood pressure check (with an appropriately sized cuff) are required. Exercise tolerance should be evaluated, and in some cases, an exercise stress test may be recommended. Obesity is frequently linked to an increase in fatty tissue around the abdomen, chest, neck, mouth, and pharynx [5]. This can result in decreased neck movement as well as a narrowing of the pharyngeal space, making it difficult to achieve and maintain a secure airway and reducing functional residual capacity, particularly in the supine position. Screening for obstructive sleep apnoea is therefore recommended, as it may be present in up to a quarter of obese women and may necessitate the use of continuous positive airway pressure (CPAP). While hospitals will have their own regulations addressing the admission and management of obese patients, bariatric patients may require special attention [6]. To meet the patient's weight and size, the department may need to purchase beds, mattresses, hoists, chairs, commodes, wheelchairs, and gowns. Prior to admittance, the patient's weight, mobility, and ability to transfer must be evaluated.

Program is required for operating on the obese patient should be available, including specific/longer surgical equipment and specifically built operating tables that can suit the patient's size and weight. Width extenders should be utilised to keep the patient's body from overhanging the table's sides. These may restrict access for surgical and anaesthetic professionals, causing them to adopt unsafe postures throughout the treatment. Additional time should be allotted for patient positioning, anaesthetic, and surgery. Transferring a patient may necessitate more personnel, and assigning an experienced anaesthetic and surgical team will help to minimise operating time and operative morbidity. There is little data on the outcomes of pelvic organ prolapse (POP) surgery in obese women. Obesity is regarded as an independent risk factor for POP surgery failure, and a recent Swedish study of 18,554 women found that a BMI more than 32 was associated with the sensation of a vaginal bulge one year after primary POP surgery. While the authors discovered no link between weight and surgical results of repeat POP surgery, or an increase in surgical complications, they did discover an increase in urine incontinence following main surgery.

Umbilical port installation or Veress needle entrance in non-obese women is done at a 30-45° angle relative to the abdominal wall. In contrast, longer trocars or a 150-mm Veress needle and a 90° umbilical entrance technique are indicated for obese women without considerable pannus to compensate the greater abdominal wall thickness and probable caudal migration of the umbilicus below the aortic bifurcation. If the surgeon has familiarity with these methods, a Palmer's point or supraumbilical entry can be considered.

Obese women who have surgery are more likely to have postoperative cardiac and respiratory problems. Cardiac problems can occur as a result of pre-existing hypertension, coronary artery disease, or cardiomegaly, and can lead to heart failure as a result of the additional surgical and anaesthetic stress. In this population, sudden fatalities owing to unexplained cardiac arrhythmias are also common. Respiratory problems can exacerbate heart problems. On an individual basis, a higher

level of postoperative monitoring in an appropriate setting, such as a high dependency care unit, may be required. Around 25% of obese women have untreated obstructive sleep apnea, which is regarded to be a contributing factor to their risk of having respiratory difficulties postoperatively. Postoperative hypoxemia, which is more common in obese patients, can be treated with incentive spirometry or CPAP [7]. The American Society of Anesthesiologists' practise guidelines for the perioperative treatment of patients with obstructive sleep apnea advocate the construction of specialised local routes. Respiratory volume monitoring devices are being tested to see if they can improve postoperative respiratory performance in these patients.

Obesity has been linked to an increase in the incidence of a variety of gynaecological diseases, including cancer. Obese women frequently require surgery, thus the gynaecologist should be aware of the impact of obesity on human physiology, as well as the additional preoperative, intraoperative, and postoperative concerns specific to this high-risk group of women, before beginning on surgery. Multidisciplinary input is frequently essential in the care of obese women, as is the use of specialist equipment on the wards and in operating rooms. Obesity is a global health crisis that is on the rise.

CONCLUSION

Obesity has been linked to benign gynaecological disease, premalignant gynaecological disorders, and gynaecological malignancy. Obese women, like non-obese women, may require surgery; therefore, practitioners should be well-versed about the impact of obesity on the woman's physiology, surgical problems, and the consequences of obesity on surgical outcomes. Clinicians must be able to inform women on the risks of surgery while also optimising their perioperative care as part of a multidisciplinary team. Current evidence supports the efficacy and safety of minimally invasive surgery in obese women, and it should be offered instead of laparotomy whenever possible.

CONFLICT OF INTEREST

The author has no conflicts of interest to declare.

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