

Obesity and surgery in gynaecology oncology

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Is obesity a problem in New Zealand? The prevalence of obesity is increasing in the developed world. In New Zealand, two per cent of the adult population are obese, compared to an OECD median of 13 per cent.

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Various methods of measuring obesity have been developed, but according to the World Health Organisation (WHO), obesity is defined as having a body mass

index (BMI) greater than or equal to 30 kg/m². Even though this measurement does not take into account the relative composition of the body with respect to muscle and fat, it does correlate to life expectancy, morbidity and mortality. In New Zealand women, the prevalence of obesity is highest in the age range from 54 to 74 years old (36 per cent), the same population that is likely to be affected by gynaecological cancers.¹

Surgery is the mainstay of treatment for most gynaecological cancers, so it is important to evaluate how obesity affects the feasibility, complication rates and long-term outcomes. The perception has always been that obesity limits the adequacy of surgery and increases complication rates. Could it be that these women more frequently have other co-morbidities that contribute to poorer outcomes? There is no doubt that technically, the procedures are more challenging to perform and impact on the surgeon's physical wellbeing, a factor that has never been taken into account.

Cervical cancer

Early cervical cancer is treated by a radical hysterectomy and pelvic lymph node dissection. Data from four small retrospective studies show that even though it is technically difficult, with increased operating time and blood loss, the number of nodes harvested, adequacy of surgical margins and survival rates did not differ between the two groups. The main intra-operative complication in the obese group was bleeding (ten per cent). Postoperative complications ranged from 20 to 90 per cent, including urinary tract infections, ileus, wound dehiscence and thromboembolic events.² The great range in incidence of complications is related to the definition of complications in different series. Accepting the limitations of the studies, namely their retrospective nature, the small sample size and variation of techniques, the collective data would suggest it is possible to offer obese women with cervical cancer a surgical option.

Endometrial cancer

The association between obesity and endometrial cancer is well documented.⁸ Compiling data from the three series, there were 469 obese and morbidly obese women compared to 333 non-obese women, with co-morbidities like hypertension, diabetes mellitus and pulmonary disease being the most frequent. Data from three series documented that 85 to 93 per cent of non-obese, 71 to 92 per cent of obese and 64 to 80 per cent of morbidly obese women were surgically staged.² Only in the morbidly obese patients was there

statistically less lymph node sampling done.³ Mean operating time and blood loss is increased in obese women. Wound infection (42 per cent in obese versus eight per cent in non-obese) and wound dehiscence (29 per cent in obese versus ten per cent in non-obese) were also more common in obese women. There seems to be a threshold where complete staging is not possible.

'Women should not be denied appropriate surgery for their cancers because of weight alone.'

In three trials, laparoscopic-assisted vaginal hysterectomy seems to be feasible with no difference in survival, intra or postoperative complications.^{9,10} Estimated blood loss was significantly less in the laparoscopic group. Wound infections and dehiscence were higher in the laparotomy group.

Ovarian cancer

Data in ovarian cancer is scant. One retrospective case controlled study showed optimal debulking was achievable in equal numbers in obese (50 per cent) and non-obese women (59 per cent).¹¹ Mean blood loss, operating time and postoperative complications were similar in the two groups. Intensive care admissions were higher in the obese group (77 per cent versus 44 per cent), but this was likely planned as most were discharged from intensive care within a day.

The set up

Even though available data suggest that surgery is feasible and safe, there is no doubt that preparation is the key element for success. This involves having an experienced anaesthetic team; good back-up from an intensive care unit; a consistent and well-trained theatre team; good assistants; and availability of equipment to improve access and visibility (for example, Bookwalter retractor and headlights).

Surgical techniques

Various surgical techniques have been developed to deal with the fact that in obese patients, the umbilicus can descend to the level of the pelvis or even lower.

Incisions used include a Maylard's transverse incision, a supraumbilical longitudinal incision and a transverse periumbilical incision.² Maylard's transverse incision offers good access to the pelvis and avoids the problem of exteriorisation of the omentum and bowel. It involves an incision at the level of the superior iliac

spines. Different layers are then entered, epigastric vessels identified and ligated. The rectus abdominis is then cut. The transversalis and peritoneum are cut transversely.

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In the supraumbilical longitudinal incision, the fat pad is pulled caudally to lower the umbilicus. The incision is performed in the midline between the umbilicus and the xiphoid process.

A panniculectomy can provide good exposure with acceptable risks for these women.^{3,4,5} The area to be excised is assessed with the patient in standing and supine positions, which is then marked. The lower incision usually follows the crease under the pannus, the upper incision is dependent on the amount to be removed. Skin and subcutaneous fat is removed down to the fascia. The apposition of flaps needs to be done without tension. Postoperative infections, wound breakdowns and hospital stay are greater for the panniculectomy group than the supraumbilical vertical midline incision group.³ Routine use of closed suction drains are associated with a significant reduction in the incidence of wound breakdowns and infections in the panniculectomy group.⁷

Mass closure with the Smead-Jones technique, using subcutaneous drains and antibiotics seem to reduce wound breakdown.^{2,3}

With bariatric surgery becoming more common, the gynaecological oncologist should also be familiar with methods by which bariatric surgical procedures are performed, so that they can manage surgical explorations and cancer resections in these patients. Wherever possible, the gynaecological oncologist should discuss the bariatric surgery with the patient's surgeon.⁶

Conclusion

Even though obese patients are a challenge to the gynaecological oncologist and the surgery will be technically difficult, data suggest that in an optimum environment, a surgical approach is possible, safe and adequate in most cases. Women should not be denied appropriate surgery for their cancers because of weight alone. Last but not least, these operations affect the surgeon's wellbeing. Not only do we need to look after our patients but remember to care for ourselves as healthcare professionals.

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