Comment on Fourth National Audit Project from the Society of Bariatric Anaesthetists

Editor—We would like to congratulate Drs Cook, Woodall, and Frerk on the Fourth National Audit Project (NAP4).1 We feel that the recommendations in Annex 5 section 13 on obesity merit some additional comment. We agree with the recommendations made but would like to add the following.

As stated in Chapters 12 and 20, preoxygenation and intubation in the obese patient should be performed with the patient in the head-up or ramped position, with the tragus of the ear level with the sternum. This position improves the efficacy of preoxygenation2 and thus maximizes the time before desaturation,3 reduces the risk of reflux, and most importantly reduces the incidence of difficult intubation closer to that of the non-obese population.4 5 Obesity is a weak risk factor for difficult intubation and the predictors of difficulty are generally the same as for normal weight patients.

Increased work of breathing and early airway closure occurring during tidal ventilation would suggest that obese patients should not be allowed to breathe spontaneously for anything other than the shortest procedure. These patients will desaturate rapidly, so the time interval from induction of anaesthesia to assisted ventilation of the lungs should be minimized. Morbidly obese patients can be at increased risk of regurgitation and aspiration, which was implicated in 50% of deaths in the NAP4 report. As most will require assistance with ventilation, we would advise great caution with the use of supraglottic airway devices (SADs) in patients with a BMI of >35 kg m\(^{-2}\). All these factors point towards a requirement for a secure airway and the Society of Bariatric Anaesthetists (SOBA) recommends tracheal intubation for the vast majority of general anaesthetics in the obese population. We believe that a tracheal tube should be the default airway, with justification required for the use of an SAD.

Whenever possible, tracheal extubation in an obese patient should likewise be performed in the head-up position with the patient awake.

In the event of a failed intubation during rapid sequence induction, the advice is to follow the Difficult Airway Society (DAS) guidelines by allowing the patient to wake up. By its nature, NAP4 was not able to address the number of cases where an airway complication was avoided by following these guidelines. Traditional UK practice has been to teach our trainees to put the patient in the left lateral position as part of the failed rapid sequence intubation drill. However, this is not part of the DAS guidelines.6 Our view is that in the event of a failed airway in a morbidly obese patient, it is safer to maintain the patient in the semi-upright position rather than move to the left lateral. Given the increasing incidence of obesity in the population, we suggest that it might be time to review traditional teaching on this topic. Details of the body position of the obese patients discussed in NAP4 might be helpful to inform this debate. Moving the morbidly obese patient is extremely difficult, and one aspect of anaesthetic management is to have appropriate equipment and staff numbers to enable timely changes of position if these are required.

We agree that the presence of obstructive sleep apnoea or obesity hypoventilation syndrome should be actively sought. We would recommend the STOP-BANG screening tool for this purpose.7 In patients with obstructive sleep apnoea or obesity hypoventilation syndrome, the use of sedatives or long-acting opioids should be avoided to minimize the risk of delayed respiratory depression and hypercapnic respiratory arrest in the postoperative period.

Problems occur because of poor choice of technique, inadequate preparation, and lack of anticipation or plans for managing airway problems. We believe that morbidly obese patients should only be managed with experienced anaesthetists present, as part of an experienced team—in the same manner as other high-risk patients.

We agree that better training in the management of the obese patient is vital, particularly the recognition of potential comorbidities and airway difficulty. The points raised by NAP4 in this respect are well made. We suggest that management of the obese patient should become a training module in the intermediate part of the anaesthetic training curriculum.

Conflict of interest

None declared.

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Reply from the authors
Editor—We would like to thank the Society of Bariatric Anaesthetists (SOBA) for their very positive comments on fourth National Audit project (NAP4).1,2 In addition to these, they suggest some lengthy additional recommendations. While much of the information presented by SOBA is included in the NAP4 report, this was not intended to be a textbook of anaesthesia and should not be regarded as a primary source of information on specialist topics within anaesthesia.

The NAP4 report represents a description of the events reported to the project and analysis of issues pertinent to these cases. Analysis was performed by a broad selection of health-care professionals, drawn from a spectrum of disciplines. SOBA is a relatively young specialist society and was formed after the start of the NAP4 project and therefore, unfortunately, was not represented in the process. Some of their comments, particularly about airway device selection and spontaneous ventilation, although reasonable might not be supported by the broader anaesthetic community and need to be bolstered by clear scientific evidence. No doubt in due course SOBA will produce and justify their own guidelines and recommendations on the management of this challenging group of patients.

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Obstructive sleep apnoea and perioperative complications in bariatric patients

Editor—I read with great interest the article by Weingarten and colleagues.1 The authors reported data on 797 patients undergoing bariatric operations and concluded that the severity of obstructive sleep apnoea (OSA) is not associated with the rate of perioperative complications. I would like to point out two limitations of the study that were not discussed but may have had significant impact on the results. First, the non-uniformity of surgical procedure may have influenced their results, although the hospital length of stay among groups was similar. This only indirectly indicates that a similar number of patients underwent banding, sleeve gastrectomy, or gastric bypass surgery. The second point has direct implications on the authors’ conclusion. The utilization of continuous positive airway pressure (CPAP) increased significantly with the severity of OSA, indicating that patients were more likely to experience a subjective benefit from the treatment. The clinical goal of CPAP treatment is to reduce the apnoea–hypopnoea index (AHI). A patient with severe OSA without CPAP may only have an AHI indicative of mild or no OSA with CPAP. Obviously, an increase in the modality (CPAP) to treat the variable that is being investigated (increase in severity of OSA) will affect the results and mitigate any differences that may have been observed, if CPAP would not have been applied or not used. This only allows the conclusion that patients who were adequately treated for OSA with CPAP do not show an increased risk of postoperative complications.

Conflict of interest
P. Z.-G. is Speaker for Cadence, Speaker for Baxter, Shareholder Cadence, and Johnson & Johnson.

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Reply from the author
Editor—We wish to thank Dr Ziemann-Gimmel for his interest in our study examining the relationship between obstructive sleep apnoea (OSA) and complications in obese patients undergoing bariatric surgery.1 He raises two important questions. First, the overall number of patients undergoing laparoscopic gastric banding and sleeve gastrectomy surgeries comprised only 2.5% of our entire cohort (19=bandings and 1=sleeve). The length of stay after these two procedures was 1.6 days. In response to this letter, we performed an additional analysis of the length of stay among patients who underwent laparoscopic surgery excluding those patients who underwent banding and sleeve procedures. Mean length of stay with the new analysis was 3.9 days, compared with 3.7 days reported in our initial study. As with our initial reported analysis, length of stay did not vary by OSA severity (P=0.27).