This article deals with recognition of the obese patient and the problems that can arise with the upper respiratory tract, as well as what anesthesia providers can do to alleviate this potential risk to the patient. A preoperative evaluation of the patient and knowledge of anatomical changes occurring with obesity will shed light on the possibility of airway complications. The technique of fiberoptic intubation will be discussed and its benefits in regard to the obese patient will become apparent.

An often encountered management problem in the operating room is the obese patient. These patients will present with many anatomical and physiological deviations from the norm. The anesthesiologist must be aware of the obese patient before arrival in the operating room and make some preanesthesia preparations. The obese patient is defined as a person who is 20% above his or her ideal weight, and the morbidly obese patient is defined as weighing twice his ideal weight.

The primary concern of the anesthetist in all patients is the establishment of an airway. This can become a difficult management problem in the obese patient. For reasons that will be discussed in this article, the technique of fiberoptic intubation should be used to avoid the problems encountered with airway management of the obese patient and make for a calmer, safer anesthetic for all.

A number of anatomical and physiological changes occur in the obese patient. This article will deal with upper airway changes and the use of fiberoptic intubation. Because of the short, thick neck, large chest, excess soft tissue, and decreased range of motion of the neck, ventilation and intubation will most probably be met with difficulty. Given the relative simplicity and safety of fiberoptic intubation in the hands of an experienced provider, its use should become commonplace with the obese patient.

When a patient fitting the definition of "obese" or "morbidly obese" is scheduled for surgery, an anesthesia professional should make a preoperative visit to determine not only the medical history but previous surgical history. The surgical history should be used to determine whether any problems have been encountered with airway management or intubation. If the obese patient has had a recent surgery and no airway problems have been noted or expressed by the patient, then awake fiberoptic intubation should not be considered, but should still be available. An emphasis should be placed on recent surgery because a distant surgery will give no indication as to the possibility of present problems and possible complications.

Preoperative medication should be prescribed on an individual basis, but drugs which contribute to respiratory depression should be avoided at all cost because of an already compromised respiratory...
A small amount of depression can cause a great deal of undesired changes due to the already compromised respiratory system of the obese patient. Awake fiberoptic intubation should be used in all obese patients unless a recent anesthetic shows no problems with intubation. The technique of fiberoptic intubation begins with a well sedated patient, with care taken to avoid respiratory depression. Once sedated, a topical spray or liquid anesthetic should be administered to anesthetize the throat and oral cavity. Intravenous lidocaine 1 mg/kg can be administered to depress laryngeal response and coughing caused by intubation and placement of the fiberoptic scope. The use of transtracheal anesthesia should be avoided because of the altered anatomy and the difficulty with palpation of landmarks in the obese patient.

The fiberoptic bronchoscope should be checked before the patient arrives in the operating room to assure that the equipment is free of problems. The bronchoscope should be lubricated to allow for easy insertion into the appropriate size endotracheal tube. Upon visualization of all of the anatomical structures as seen with laryngoscopic intubation and identification of the vocal cords, the tip of the fiberoptic scope should pass through the cords and will act as a guide over which the endotracheal tube will slide past the cord and into position. The fiberoptic scope can be used to check the endotracheal tube position by visualization of the carina, then it can be removed and breath sounds checked to verify that the endotracheal tube has not moved. Because the obese patient’s breath sounds may be difficult to hear and chest movement hard to evaluate, when a question arises about the position of the endotracheal tube, once again the fiberoptic bronchoscope can be inserted directly into the endotracheal tube or via a side port on the tube to allow for visualization of the carina and left and right main stem bronchi. After assuring correct positioning of the endotracheal tube, the anesthetic can then proceed as previously planned.

There are many other considerations for the obese patient, but airway management is the first problem encountered by the anesthesia professional. If the anesthesia provider is aware of anatomical and physiological changes in the obese patient, and has the equipment and knowledge to perform an awake fiberoptic intubation, anesthesia care can be given safely and without undue stress on patient or anesthetist. Fiberoptic intubation is not means the only way of intubating the obese patient, but should questions arise about the airway of an obese patient, the anesthesia provider should be prepared and educated in the use of the fiberoptic bronchoscope.

REFERENCES
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