

Can my respiratory management worsen patient outcome ?

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Pulmonary complications remain a significant source of perioperative morbidity. Perioperative respiratory management has the potential for both benefit and harm. There is now evidence that high tidal volumes and inspired oxygen concentrations may be harmful even in patients with normal lungs, increasing their vulnerability to other insults. Indeed, the use of “routine” mechanical ventilation with pharmacologic paralysis in the absence of a surgical indication may be questioned, given the potential benefits of spontaneous ventilation and the risk of neuromuscular blocking drugs. Such techniques often lead to hypocapnia, which may have deleterious consequences such as an increase in postoperative wound infection rates and delayed cognitive recovery from anesthesia. Smoking is an important risk factor for several perioperative complications, including cardiac, pulmonary, and wound-related complications. A belief exists that stopping smoking immediately before surgery will increase the rate of pulmonary complications. Although it is true that several weeks of abstinence

are necessary to reduce pulmonary complications, it is not true that brief abstinence increases their frequency – and such abstinence may reduce the risk of cardiac and wound-related complications. Thus, any time is a good time for surgical patients to quit smoking, and anesthesiologists should help them to do so. Bronchospasm is a potential source of severe morbidity in patients with reactive airways diseases. There are a variety of prophylactic measures against bronchospasm, such as the use of inhaled β_2 agonists, which should be routinely applied to these patients. Techniques that promote postoperative lung expansion, such as incentive spirometry and early mobilization, reduce pulmonary complications. Anesthesiologists should not assume that others will apply these methods consistently, but should be actively involved in assuring their proper administration. With attention to such relatively simple details, anesthesiologists can reduce the risk of pulmonary complications and safely shepherd even patients with severe lung disease through surgery.