nadir of thrombocytopenia might occur beyond 24 hours postpartum (3). It is also unusual to have severe hemorrhage with a platelet count over 40,000/μL (4).

Eric Goldszmidt, MD, FRCPC
Department of Anesthesia and Pain Management
Mount Sinai Hospital
Toronto, Canada
e.goldszmidt@utoronto.ca

References

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In Response:
We thank Dr. Goldszmidt for his interest in our case report describing the use of the ProSeal™ laryngeal mask airway (PLMA) for airway rescue and postoperative ventilation in an obstetric patient with a known difficult airway and HELLP syndrome. We will respond to each of his points in turn.

First, Dr. Goldszmidt is concerned that we conducted a rapid sequence induction in a patient with a known difficult airway, thereby contravening the American Society of Anesthesiologists recommendation to conduct awake tracheal intubation in this situation (1). However, this recommendation does not apply to the patient who "refuses or cannot cooperate" (1). Our patient, who had no cerebral impairment, refused awake intubation and refused regional anesthesia, we therefore had to proceed with general anesthesia or ignore the patient’s rights to self-determination. There was no time for a psychological evaluation of the patient’s decision. Regional anesthesia would also have been risky due to the rapidly falling platelet count, which would have been below 50,000/mm³ by the time surgery commenced, as it fell from 133,000 to 80,000/mm³ in 2 h, and surgery was performed 2 h after the last count. In our institute, we follow the “rule of 50” and avoid regional anesthesia if the PT is below 50 s, performed 2 h after the last count. In our patient, who had no cerebral impairment, regional anesthesia would also have been risky due to the rapidly falling platelet count, which would have been below 50,000/mm³ by the time surgery commenced, as it fell from 133,000 to 80,000/mm³ in 2 h, and surgery was performed 2 h after the last count. In our institute, we follow the “rule of 50” and avoid regional anesthesia if the PT is below 50 s, performed 2 h after the last count.

Second, Dr. Goldszmidt indicates that the use of ProSeal™ laryngeal mask airway (PLMA) for airway rescue and postoperative ventilation in an obstetric patient with a known difficult airway and HELLP syndrome. We will respond to each of his points in turn.

First, Dr. Goldszmidt is concerned that we conducted a rapid sequence induction in a patient with a known difficult airway, thereby contravening the American Society of Anesthesiologists recommendation to conduct awake tracheal intubation in this situation (1). However, this recommendation does not apply to the patient who “refuses or cannot cooperate” (1). Our patient, who had no cerebral impairment, refused awake intubation and refused regional anesthesia, we therefore had to proceed with general anesthesia or ignore the patient’s rights to self-determination. There was no time for a psychological evaluation of the patient’s decision. Regional anesthesia would also have been risky due to the rapidly falling platelet count, which would have been below 50,000/mm³ by the time surgery commenced, as it fell from 133,000 to 80,000/mm³ in 2 h, and surgery was performed 2 h after the last count. In our institute, we follow the “rule of 50” and avoid regional anesthesia if the PT is below 50 s, performed 2 h after the last count.

Second, Dr. Goldszmidt indicates that the discovery of 300 mL of residual fluid in the stomach further emphasizes the folly of our approach. We were well aware that this patient was at risk of aspiration and we took measures to prevent this occurring, including the application of cricoid pressure and the use of the PLMA rather than the classic LMA for airway rescue. Perhaps we could have used the esophageal trancheal Combitube to protect the airway, but this exerts high pressures against the pharyngeal mucosa (2) and has a high incidence of airway trauma (3).

Third, Dr. Goldszmidt implies that the use of the PLMA is a retrograde step towards reducing the obstetric anesthesia mortality rate. We consider that the use of the PLMA in failed obstetric intubation is an important step forward because (i) high airway pressure ventilation is feasible, (ii) the airway can be protected, and (iii) very high first attempt success rates are possible using an esophageal guide, such as a gum elastic bougie, which may already be in the esophagus following failed tracheal placement (4).

Fourth, while agreeing that the lowest platelet count can occur after 24 h in patients with HELLP syndrome and that bleeding is unlikely with a platelet count above 40,000/mm³, in our patient the nadir occurred shortly after the procedure and was as low as 20,000/mm³.

Finally, once committed to general anesthesia, we devised a plan to minimize the risk of failed airway management by (i) having a surgeon available to perform a surgical airway, (ii) having two highly experienced anesthesiologists make their best attempts at face mask ventilation and laryngoscope-guided tracheal intubation, and (iii) by using an airway rescue technique with a known high success rate in the failed ventilation, failed intubation scenario (5).

Joseph Brimacombe, MD
Department of Anesthesia and Intensive Care
Cairns Base Hospital
Cairns, Australia
jbrimaco@bigpond.net.au

Christian Keller, MD
Department of Anesthesia and Intensive Care Medicine
Leopold-Franzus University
Innsbruck, Austria

References

Study Regarding Anesthesia Outcomes Cites Outdated Studies
To the Editor:
As a CRNA currently working in a team anesthesia setting, I feel obliged to write regarding “Is Physician Anesthesia Cost Effective?” (1) This is the most recent attempt to prove anesthesia outcomes by quoting outdated studies (2,3) with significant limitations. By basing their findings on an obsolete study of perioperative mortality and quoting outdated studies with significant limitations. By basing their findings on an obsolete study of perioperative mortality and stating a 60% increase in anesthesiologists as the reason that patient outcomes have dramatically improved, the authors disregard the advancements made both in pharmacology and monitoring. The elegant 2003 study of surgical mortality and type of anesthesia provider by Pine et al. (4) found similar risk-adjusted mortality rates between hospitals without anesthesiologists and hospitals where anesthesiologists provided or directed care. This study also has double the amount of participants than the studies quoted by Abenstein et al (1). Abenstein et al. stated that anesthesia conversion factors are the same for CRNAs and physicians. If that is true, and differences in mortality cannot be shown, then it should be a simple matter to prove true cost-effectiveness. The study should include salary, cost of office space, support staff, computers, business trips, and benefits. If one compared the true cost per hour versus the amount of revenue generated, one would surely see which anesthesiology model is most cost-effective.

Marilyn Weis, MNA, CRNA
Department of Anesthesiology
Mayo Clinic
Rochester, MN
weis.marilyn@mayo.edu

References

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In Response:
We appreciated Ms. Weis’s feedback to our recent article (1). It is important to understand that our ad hoc cost-effectiveness model was designed from the payer’s, not employer’s, perspective. Specifically, the question we tried to answer was whether there was a difference in cost to payers between physician and nurse anesthesia.

In Response:
We appreciated Ms. Weis’s feedback to our recent article (1). It is important to understand that our ad hoc cost-effectiveness model was designed from the payer’s, not employer’s, perspective. Specifically, the question we tried to answer was whether there was a difference in cost to payers between physician and nurse anesthesia.
If there was increased cost associated with physician anesthesia, we also determined whether this was cost-effective from a societal perspective. We did not examine the cost to employers (i.e., salary, benefits, productivity, hours-per-week, and so on).

Our survey of anesthesia practices throughout the United States clearly showed that the anesthesia conversion factor paid by private payers was the same for physicians and nurses (i.e., $49.02 ± 13.63 vs $47.27 ± 14.44 per anesthesia unit, \(P = 0.595\), respectively). Medicare pays the same fee no matter how the anesthetic is delivered. Considering the fact that the average anesthetic generates 13 anesthesia units, private payers, on average, see a $23.79 per anesthetic increased cost for physician anesthesia as compared with nurse anesthesia.

Whether physician anesthesia is a cost-effective practice model is dependent on the difference, if any, in patient outcomes. To answer this question we incorporated the results of Silber et al. (2), not Bechtoldt (3) or Forest (4). This study of more than 200,000 patients showed an improved 30-day postoperative mortality rate of 1 patient per 400 anesthesias when anesthesia was delivered with physician anesthesia, \(P < 0.04\). The avoided incremental cost of perioperative death was also incorporated into the model. Considering an actuarial life expectancy of 20 years, the calculated fiscal impact of physician anesthesia, as compared with nurse anesthesia, was a reduction in net health care costs of (−$2,600) per year-of-life-saved. Pine et al.’s study was published after our manuscript was submitted, but it is worth noting that this investigation showed a more frequent inpatient mortality rate with nurse anesthesia as compared with anesthesia care team practices, 0.46% vs 0.34%, respectively, or an excess inpatient death rate of 1 per 800 anesthetics (5).

We recognized that the data used in our ad hoc model was potentially biased in favor of physicians. Therefore, we recalculated the dollars-per-years-of-life-saved when cost differences between physicians and nurses were far larger than reported, when outcome differences were far smaller, and when the cost of avoidable deaths were far less. Under both univariate and multivariate scenarios, the cost to payers fell well below the societal threshold of $50–$80,000 per year-of-life-saved.

While Ms. Weis’s concerns are well taken, we believe our survey data are reliable and consistent with public sources. In addition, the methodology and results of Silber et al. (2) are comparable with those of similar investigations, such as Needleman et al.’s study (6) of hospital outcomes related to the proportion of register nurses involved inpatient care. Our ad hoc model was validated by a sensitivity analysis that adjusted for potential physician bias. Finally, although we recognize the concerns expressed with the difference between physician and nursing compensation, but as pointed out above, the purpose of this study was to determine the cost-effectiveness of physician anesthesia from a payer, not an employer, perspective. We note, however, that employers who offer only nurse anesthesia appear to charge physician fees, pay nursing salaries, retain the difference, and leave patients to bear the consequences.

References