critically ill surgical patients. The 28-day mortality did not differ significantly between the two groups: 24% in the transfusion. The crystalloid arm contained 356 patients, while the colloid arm contained 385 patients. A pre-planned, sub-group analysis of the previous CRISTAL trial, specifically focusing on surgical patients with hypovolemic shock. Dr. Nicholas Hemming of the University of Versailles Saint-Quentin-en-Yvelines, France, and colleagues there and in Texas and Italy tested the hypothesis that individually titrated PEEP during anesthesia might improve lung function during and after surgery. Forty patients underwent elective abdominal surgery, 20 with incised pneumothorax, and 20 having open laparotomy. They were randomized to standard PEEP (4 cmH2O), or to PEEP guided by Electrical Impedance Tomography. All patients first underwent recruitment maneuvers. Tomography-guided PEEP was applied after the recruitment maneuvers and targeted at minimizing the percentage of overdistended and collapsed lung units. All patients then underwent chest CT after extubation. The primary goal of tomography-guided PEEP was to identify the PEEP value that produced the best compromise of lung collapse and hyperdistention in each patient. The authors found that tomography-guided PEEP varied markedly across individuals. The mean was 12 cmH2O, but the range was 6 to 16 cmH2O. Compared with PEEP of 4 cmH2O, patients randomized to PEEP guided by tomography-guided PEEP arm had higher intraoperative oxygenation, while having equivalent mean arterial pres- sures during surgery. The authors concluded that individu- alized PEEP settings could reduce postoperative atelectasis and improve intraoperative oxygenation and driving pressures while causing minimal side effects.

Our next investigation focuses on attempts to develop and validate a score to help phar- macists guide which patients receive perioperative vitamin K antagonist reversal. The goal was to avoid the unnecessary administration of low-risk patients. Dr. Raphael C. Cottin of University Hospital of Nantes, Nantes, France, and colleagues there and elsewhere in France created a score in a learning cohort of 1,094 patients undergoing elective craniotomy in the cricothyroid membrane was 9-fold greater with external palpation than with ultrasound. They concluded that ultrasound is more accurate than external palpation in localizing the cri- cothyroid membrane, which is the primary landmark during a cricothyroidotomy.

Anesthesiology, V 129 • No 6 December 2018
PODCAST TRANSCRIPTION
Hi, this is Evan Kharasch, Editor-in-Chief of Anesthesiology, with some high- lights from the December 2018 issue, as selected by the journal editors. We know that physiological tidal volume and positive End-Expiratory Pressure (PEEP) are protective in patients with acute respiratory distress syndrome. However, optimal PEEP in patients without lung diseases undergoing mechanical ventilation under general anesthesia is unknown. Dr. Sergio M. Pereira of the University of Sao Paulo, Brazil, and colleagues there and in Texas and Italy tested the hypothesis that individually titrated PEEP during anesthesia might improve lung function during and after surgery. Forty patients underwent elective abdominal surgery, 20 with incised pneumothorax, and 20 having open laparotomy. They were randomized to standard PEEP (4 cmH2O), or to PEEP guided by Electrical Impedance Tomography. All patients first underwent recruitment maneuvers. Tomography-guided PEEP was applied after the recruitment maneuvers and targeted at minimizing the percentage of overdistended and collapsed lung units. All patients then underwent chest CT after extubation. The primary goal of tomography-guided PEEP was to identify the PEEP value that produced the best compromise of lung collapse and hyperdistention in each patient. Success was defined as the proportion of accurate identifications within 5 mm. The percentage of accurate identifications was 10-fold greater in the ultrasound group (81% vs 8%). The mean distance measured from the cricothyroid to the point identified by external palpation was 5-fold greater than that identified by ultrasound. The primary outcome was the accuracy in that identification. Siddiqui et al. determined that the risk ratio of inaccurate localization of the cricothyroid membrane was 9-fold greater with external palpation than with ultrasound. They concluded that ultrasound is more accurate than external palpation in localizing the cri- cothyroid membrane, which is the primary landmark during a cricothyroidotomy.

Hi, this is Evan Kharasch, Editor-in-Chief of Anesthesiology, with some high- lights from the December 2018 issue, as selected by the journal editors. We know that physiological tidal volume and positive End-Expiratory Pressure (PEEP) are protective in patients with acute respiratory distress syndrome. However, optimal PEEP in patients without lung diseases undergoing mechanical ventilation under general anesthesia is unknown. Dr. Sergio M. Pereira of the University of Sao Paulo, Brazil, and colleagues there and in Texas and Italy tested the hypothesis that individually titrated PEEP during anesthesia might improve lung function during and after surgery. Forty patients underwent elective abdominal surgery, 20 with incised pneumothorax, and 20 having open laparotomy. They were randomized to standard PEEP (4 cmH2O), or to PEEP guided by Electrical Impedance Tomography. All patients first underwent recruitment maneuvers. Tomography-guided PEEP was applied after the recruitment maneuvers and targeted at minimizing the percentage of overdistended and collapsed lung units. All patients then underwent chest CT after extubation. The primary goal of tomography-guided PEEP was to identify the PEEP value that produced the best compromise of lung collapse and hyperdistention in each patient. Success was defined as the proportion of accurate identifications within 5 mm. The percentage of accurate identifications was 10-fold greater in the ultrasound group (81% vs 8%). The mean distance measured from the cricothyroid to the point identified by external palpation was 5-fold greater than that identified by ultrasound. The primary outcome was the accuracy in that identification. Siddiqui et al. determined that the risk ratio of inaccurate localization of the cricothyroid membrane was 9-fold greater with external palpation than with ultrasound. They concluded that ultrasound is more accurate than external palpation in localizing the cri- cothyroid membrane, which is the primary landmark during a cricothyroidotomy.

Anesthesiology, V 129 • No 6 December 2018
PODCAST TRANSCRIPTION
Hi, this is Evan Kharasch, Editor-in-Chief of Anesthesiology, with some high- lights from the December 2018 issue, as selected by the journal editors. We know that physiological tidal volume and positive End-Expiratory Pressure (PEEP) are protective in patients with acute respiratory distress syndrome. However, optimal PEEP in patients without lung diseases undergoing mechanical ventilation under general anesthesia is unknown. Dr. Sergio M. Pereira of the University of Sao Paulo, Brazil, and colleagues there and in Texas and Italy tested the hypothesis that individually titrated PEEP during anesthesia might improve lung function during and after surgery. Forty patients underwent elective abdominal surgery, 20 with incised pneumothorax, and 20 having open laparotomy. They were randomized to standard PEEP (4 cmH2O), or to PEEP guided by Electrical Impedance Tomography. All patients first underwent recruitment maneuvers. Tomography-guided PEEP was applied after the recruitment maneuvers and targeted at minimizing the percentage of overdistended and collapsed lung units. All patients then underwent chest CT after extubation. The primary goal of tomography-guided PEEP was to identify the PEEP value that produced the best compromise of lung collapse and hyperdistention in each patient. Success was defined as the proportion of accurate identifications within 5 mm. The percentage of accurate identifications was 10-fold greater in the ultrasound group (81% vs 8%). The mean distance measured from the cricothyroid to the point identified by external palpation was 5-fold greater than that identified by ultrasound. The primary outcome was the accuracy in that identification. Siddiqui et al. determined that the risk ratio of inaccurate localization of the cricothyroid membrane was 9-fold greater with external palpation than with ultrasound. They concluded that ultrasound is more accurate than external palpation in localizing the cri- cothyroid membrane, which is the primary landmark during a cricothyroidotomy.

Our next study retrospectively evaluated transfusion practice. It examined the per- sistent impression that orthopedic surgery patients require a higher hemoglobin transfusion threshold than other patient populations, that is, 8 vs 7 g/dL. Pranjal Gupta of Johns Hopkins University and colleagues there and at Wellsoft in Cleveland, Ohio, hypothesized the hypothesis that implementation of a patient blood management program encouraging a hemoglobin threshold ≤ 7 g/dL results in decreased blood utilization with no change in clinical outcomes. After launching a multifaceted patient blood management program, the authors retrospectively evaluated all adult orthopedic patients to compare transfusion practices and clinical outcomes in pre- and post-blood management cohorts. After patient blood man- agement implementation, the mean hemoglobin transfusion threshold decreased from 7.8 to 6.8 g/dL. Erythrocyte use decreased by 32%, from 338 to 228 erythrocyte units per 1,000 patients. Clinical outcomes improved. There was decreased morbidity, from 1.3% to 0.5%, decreased operative morbidity or mortality (from 1.5% to 0.75%), and decreased 30-day readmissions, from 9% to 6%. Improved outcomes were primarily observed in patients 65 years of age or older. After risk adjustment, patient blood management was independently associated with decreased composite morbidity or mortality, with an odds ratio of 0.44. The authors concluded that a hemoglobin threshold of 7 g/dL appears to be safe for many ortho- pedic patients.