



Intraoperative Pneumothorax Identified with Transthoracic Ultrasound (Case Report) 653

In two cases, intraoperative transthoracic ultrasound was used to diagnose pneumothorax. *See the accompanying Editorial View on page 460*

Free Cortisol and Accuracy of Total Cortisol Measurements in the Diagnosis of Adrenal Insufficiency in Brain-dead Patients 568

Total baseline cortisol measurement can be used to diagnose adrenal insufficiency in brain-dead patients.

Nerve Stimulator-guided Supplemental Popliteal Sciatic Nerve Block after a Failed Sciatic Block Does Not Increase the Incidence of Transient Postoperative Neurologic Sequelae 596

A supplemental popliteal sciatic nerve block does not increase later neurologic symptoms.

Perioperative Single Dose Systemic Dexamethasone for Postoperative Pain: A Meta-analysis of Randomized Controlled Trials 575

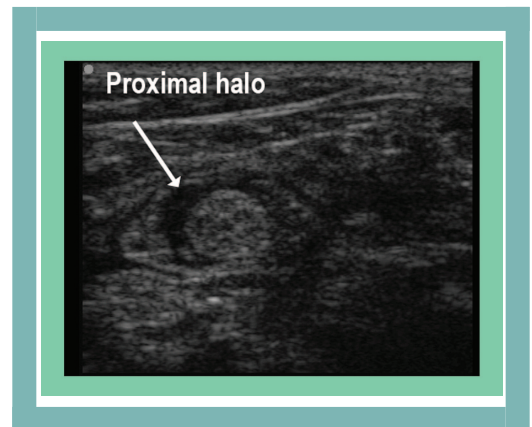
Dexamethasone can be used to reduce postoperative pain. *See the accompanying Editorial View on page 457*

Reducing Noninfectious Risks of Blood Transfusion (Review Article) 635

Methods for prevention of noninfectious complications of transfusion are reviewed.

No Clinical or Electrophysiologic Evidence of Nerve Injury after Intraneural Injection during Sciatic Popliteal Block 589

Intraneural injection occurs commonly during peripheral nerve blockade, and may cause injury. Location and spread of injectate were assessed by ultrasound and contrast-aided computed tomography in 17 patients undergoing popliteal block. Of these, 16 met criteria for intraneural injection. Observations included fascicular separation (70%), air within the nerve (29%), contrast along bifurcations (65%), and concentric contrast layers (100%). Neither neurologic dysfunction nor nerve injury was detected by either clinical or electrophysiologic exams. Although nerve stimulator-guided sciatic block often results in intraneural injection, it may not lead to nerve injury.



High Oxygen Partial Pressure Decreases Anemia-induced Heart Rate Increase Equivalent to Transfusion 492

Lower hemoglobin concentrations are associated with increased mortality in surgical patients. In healthy volunteers undergoing experimental isovolemic anemia, the effects of high inspired oxygen fraction and erythrocyte transfusion on anemia-induced increased heart rate were compared. Heart rate significantly increased by 3.9 beats per minute per gram of decreasing hemoglobin ($P < 0.001$). Transfusion of autologous erythrocytes significantly decreased heart rate by 5.2 beats per minute per gram of hemoglobin ($P < 0.001$). Breathing 100% oxygen with a hemoglobin of 5.6 g/dl decreased heart rate to 83.0 beats per minute. High oxygen partial pressure reversed the heart rate response to anemia. High inspired oxygen could be trialed to reduce adverse effects of anemia in perioperative patients.

Influence of Erythrocyte Transfusion on the Risk of Acute Kidney Injury after Cardiac Surgery Differs in Anemic and Nonanemic Patients 523

Acute kidney injury is associated with markedly worse short- and long-term outcomes in patients undergoing cardiac surgery. This large cohort study examined the role of perioperative anemia and perioperative erythrocyte transfusion on patient outcomes. After propensity-score matching, anemic patients had a significantly higher rate of acute kidney injury compared with nonanemic patients ($P = 0.0007$). Erythrocyte transfusion led to an increase in acute kidney injury, which was more pronounced in anemic patients. Overall, anemic patients are more susceptible to transfusion-related acute kidney injury.