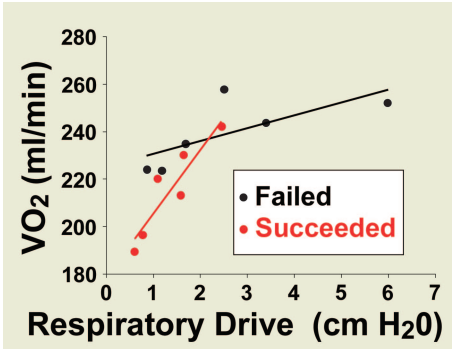
THIS MONTH IN
Anesthesiology

Increase of Oxygen Consumption during a Progressive Decrease of Ventilatory Support Is Lower in Patients Failing the Trial in Comparison with Those Who Succeed 378



Weaning failure from ventilator support may occur because of an increased mechanical load and increased oxygen consumption ($\dot{V}O_2$) and demand. To test this hypothesis, patients (N = 28) ventilated for at least 30 days and deemed eligible for weaning were enrolled to measure oxygen consumption and respiratory distress requiring reventilation. Pressure support was incrementally decreased from 20 to 0 cm H_2O followed by 1 h at 0 cm H_2O. Weaning failure occurred in 12 of 28 patients. In the failure group, minimum mean oxygen consumption was higher (174 ± 44 *vs.* 215 ± 53 ml/min, $P < 0.05$), respiratory drive increased more, and there was a smaller increase in oxygen consumption. In contrast to the authors' hypothesis, patients who failed a decremental pressure support weaning trial had a higher baseline oxygen consumption and were not able to increase their oxygen consumption in response to an increased demand. *See the accompanying Editorial View on* **page 273**

Multicenter, Randomized, Comparative Cost-effectiveness Study Comparing 0, 1, and 2 Diagnostic Medial Branch (Facet Joint Nerve) Block Treatment Paradigms before Lumbar Facet Radiofrequency Denervation 395

Despite the frequency of use and potential utility of diagnostic blocks of facet joint pain, proper selection of patients for radiofrequency denervation remains unclear. In this multicenter study, patients (N = 151) with suspected lumbar facetogenic pain were randomized to radiofrequency denervation based solely on clinical findings (group 0); denervation contingent on a positive response to a single diagnostic block (group 1); and denervation only after a positive response to comparative blocks done with lidocaine and bupivacaine (group 2). Then pain relief to radiofrequency denervation was measured. Successful outcomes were observed at 3 months in 17 (33%), 8 (16%), and 11 (22%) patients in groups 0, 1, and 2, respectively. Pain scores at functional capacity were significantly lower in group 2 patients compared with other groups at 3 months but not 1 month. The associated costs were highest in group 1 ($17,142) compared with group 0 ($6,286) or group 2 ($15,241). *See the accompanying Editorial View on* **page 276**

Anesthetic Management and Surgical Site Infections in Total Hip or Knee Replacement: A Population-based Study 279

Through review of a claims database, this study examined the risk of surgical site infections (SSIs) within 30 days of surgery for patients (N = 3,081) receiving total hip or knee replacement with general *versus* those with epidural/spinal anesthesia. SSIs occurred in 56 (1.8%) of all patients; of these, 33 had general anesthesia and 23 had epidural or spinal anesthesia ($P = 0.002$). After adjusting for baseline factors and comorbidities, the odds of SSI for patients receiving total hip or knee replacement with general anesthesia were 2.21 (95% confidence interval = 1.25–3.90, $P = 0.007$) times higher than for those who had the same procedure with epidural/spinal anesthesia. This study supports previous reports that risk of SSI is higher in patients undergoing total hip or knee replacement with general anesthesia compared with epidural/spinal anesthesia. *See the accompanying Editorial View on* **page 265**