Amniotic fluid embolus: can we affect the outcome?
Ayoub CM; Zreik TG; Dabbous AS; Baraka AS.
[Journal Article]
PURPOSE OF REVIEW: Amniotic fluid embolism is a rare catastrophe unique to pregnancy. Its mortality rate remains high despite efforts at prompt and aggressive management protocols, highlighting the need to maintain a high index of suspicion. RECENT FINDINGS: The intrusion of amniotic fluid into the maternal bloodstream may lead in certain women to a complex series of physiological reactions mimicking those seen in human anaphylaxis or sepsis, negating the purely embolic phenomenon theory as previously understood. The clinical picture is the sudden onset of cardiovascular collapse, cyanosis, haemorrhage or disseminated intravascular coagulopathy, during or soon after delivery. SUMMARY: The mainstay of a successful outcome remains the identification of high-risk patients, as well as early clinical diagnosis and management.

Anesthesia and myopathy.
Baraka AS; Jalbout MI.
[Journal Article]
PURPOSE OF REVIEW: This report reviews the derangements of neuromuscular transmission in the different types of myopathy. RECENT FINDINGS: The article covers recent literature on myopathy, whether prejunctiional, junctional or postjunctiional, as well as intensive care unit myopathy, and outlines the influence of myopathy on the action of both depolarizing and non-depolarizing muscle relaxants. SUMMARY: The review classifies myopathy according to its cause, and sheds light on the upregulation and downregulation of endplate acetylcholine receptors. These findings are important for both clinical practice, and for research into neuromuscular transmission.

The pregnant cardiac woman.
Ayoub CM; Jalbout MI; Baraka AS.
[Journal Article]
Cardiac diseases are present in 0.5-4% of pregnancies, and they remain a frequent cause of death during pregnancy. Pregnancy per se imposes significant hemodynamic changes, placing a major burden on the cardiovascular system. The early recognition and close follow-up of
patients with cardiac diseases will improve maternal tolerance to the cardiovascular burden imposed by pregnancy, promote fetal growth and neonatal survival. Rheumatic heart disease remains the most frequent heart disease in the pregnant population with pulmonary edema as the most frequent complication. Atrial septal defect is the most frequent congenital heart disease in the adult population, whereas tetralogy of Fallot is the most common cyanotic congenital heart disease. An improvement in modern techniques of monitoring, a better understanding of the pathophysiology of cardiac disease, as well as multidisciplinary care has led to a substantial improvement in outcome of the pregnant cardiac patient. Management should be initiated before conception as it will provide optimal clinical conditions and sufficient information on the underlying pathophysiology.

4.

Effect of suxamethonium vs rocuronium on onset of oxygen desaturation during apnoea following rapid sequence induction.
Taha SK; El-Khatib MF; Baraka AS; Haidar YA; Abdallah FW; Zbeidy RA; Siddik-Sayyid SM.
[Comparative Study. Journal Article. Randomized Controlled Trial]
This study investigates the effect of suxamethonium vs rocuronium on the onset of haemoglobin desaturation during apnoea, following rapid sequence induction of anaesthesia. Sixty patients were randomly allocated to one of three groups. Anaesthesia was induced with lidocaine 1.5 mg.kg\(^{-1}\), fentanyl 2 microg.kg\(^{-1}\) and propofol 2 mg.kg\(^{-1}\), followed by either rocuronium 1 mg.kg\(^{-1}\) (Group R) or suxamethonium 1.5 mg.kg\(^{-1}\) (Group S). The third group received propofol 2 mg.kg\(^{-1}\) and suxamethonium 1.5 mg.kg\(^{-1}\) only (Group SO). The median (IQR [range]) time to reach S(p)O(2) of 95% was significantly shorter in Group S (358 (311-373 \[245-430\]) s) \[corrected\] than in Group R (378 (370-393 [366-420]) s; \(p = 0.003\), and shorter in Group SO (242 (225-258 [189-270]) s) \[corrected\] than in both Group R \((p < 0.001)\) and Group S \((p < 0.001)\). When suxamethonium is administered for rapid sequence induction of anaesthesia, a faster onset of oxygen desaturation is observed during the subsequent apnoea compared with rocuronium. However, time to desaturation is prolonged whenever lidocaine and fentanyl precede suxamethonium. \[Erratum in: Anaesthesia. 2010 Aug;65(8):874\]

5.

Dexamethasone with either granisetron or ondansetron for postoperative nausea and vomiting in laparoscopic surgery.
Dabbous AS; Jabbour-Khoury SI; Nasr VG; Moussa AA; Zbeidy RA; Khouzam NE; El-Khatib MF; Baraka AS.
[Comparative Study. Journal Article. Randomized Controlled Trial]
In a prospective randomized double-blind study, we compared the effectiveness of dexamethasone 8 mg with either granisetron 1 mg or ondansetron 4 mg in the prevention of postoperative nausea and vomiting in patients undergoing laparoscopic surgery. Hundred ASA I and II patients scheduled for laparoscopic surgery were enrolled in the study and 84 patients
completed it. Following induction of anesthesia, group I (n=42) received granisetron 1 mg and dexamethasone 8 mg, group II (n=42) received ondansetron 4 mg and dexamethasone 8 mg. Nausea and vomiting episodes, pain scores as well as side effects were recorded during the first hour and subsequently during the first 6 and 24 hours postoperatively. Satisfaction scores were obtained at discharge. There was no statistically significant difference between the 2 groups during the 1st 24 hours following surgery in regards to pain scores, satisfaction and side effects manifestations. At 0-1 hour interval, 100% of patients in group I and 97.6% in group II had no vomiting. Total response (no moderate or severe nausea and no rescue antiemetics) was 83.3% in group I and 80.95% in group II, and metoclopramide was used in 7.1% of patients in both groups. At 1-6 hours interval, 97.6% of patients in group I and 100% in group II had no vomiting. Total response was 92.8% in group I and 90.9% in group II, and metoclopramide was used in 4.76% of patients in group I and 2.38% in group II. At 6-24 hours no vomiting occurred in 97.6% of patients in group I and 100% in group II. Total response was 95.2% in both groups, and metoclopramide was used in 2.38% of patients in both groups. In conclusion, the combination of dexamethasone 8 mg with either granisetron 1 mg or ondansetron 4 mg following induction of anesthesia in patients undergoing laparoscopic surgery showed no statistically significant difference in antiemetic efficacy with minimal side effects and excellent patient satisfaction.

6.

Preoxygenation by 8 deep breaths in 60 seconds using the Mapleson A (Magill), the circle system, or the Mapleson D system.
Taha SK; El-Khatib MF; Siddik-Sayyid SM; Abdallah FW; Dagher CM; Chehade JM; Baraka AS. Journal of Clinical Anesthesia. 21(8):574-8, 2009 Dec.
[Comparative Study. Journal Article. Randomized Controlled Trial]
STUDY OBJECTIVE: To investigate the efficacy of preoxygenation by eight deep breaths in 60 seconds with the Mapleson A (Magill) system, the circle anesthesia system, or the Mapleson D system at an oxygen flow of 5 L/min or 10 L/min. DESIGN: Randomized, clinical study.
SETTING: Operating room of a university hospital. SUBJECTS: 10 healthy volunteers.
INTERVENTIONS: Volunteers underwent 6 preoxygenation trials consisting of 8 deep breaths in 60 seconds using the Mapleson A, Mapleson D, and the circle anesthesia systems at an oxygen flow of 5 L/min and 10 L/min. MEASUREMENTS: Fractional end-tidal oxygen concentration (F(ET)O(2)) was measured at 15-second intervals during preoxygenation. RESULTS: At an oxygen flow of 10 L/min, mean F(ET)O(2) values at 60 seconds of preoxygenation were comparable among the Mapleson A, Mapleson D, and the circle anesthesia systems (87 +/- 2.1%, 87 +/- 1.6%, 87 +/- 1.6%, respectively). Using an oxygen flow of 5 L/min, mean F(ET)O(2) values at 60 seconds were similar among the Mapleson A, Mapleson D, and circle anesthesia systems (74 +/- 4.1%, 75 +/- 2.6%, 74 +/- 4.4%, respectively); however, they were significantly lower than the corresponding values achieved at an oxygen flow of 10 L/min. CONCLUSIONS: The 8-deep-breaths in 60 seconds technique at an oxygen flow of 10 L/min can achieve adequate preoxygenation with the Mapleson A (Magill), Mapleson D, and circle anesthesia systems. Suboptimal preoxygenation is obtained with the three systems when the oxygen flow used is 5 L/min.
Unusual case of difficult double-lumen endotracheal tube removal.
Yazbek-Karam VG; Haswani RW; Karam HS; Haddad WM; Youssef PS; Hachem BF; Atik FT; Rassi SJ; Yammine JN; Baraka AS; Aouad MT.
[Case Reports. Journal Article]
A reusable Robertshaw red rubber double-lumen endotracheal tube (DLT) was placed to facilitate lung isolation for thoracoscopy in a 49-year-old atopic patient. In spite of its smooth insertion, it was then not possible to remove the DLT. Direct laryngoscopy showed severe laryngeal edema. After 48 hours of medical treatment with steroids, the trachea was extubated. The laryngeal edema could have been the result of physical and chemical irritation by the reusable rubber DLT itself, or from the substances formed during repeated cleaning and sterilization of the DLT. Atopic patients who are prone to developing latex allergy are also more liable to develop severe reactions to chemical, mechanical, and physical irritation from reusable red rubber DLTs or from the chemical solution used for its cleaning and sterilization.

A randomized trial comparing colloid preload to coload during spinal anesthesia for elective cesarean delivery.
Siddik-Sayyid SM; Nasr VG; Taha SK; Zbeide RA; Shehade JM; Al Alami AA; Mokadem FH; Abdallah FW; Baraka AS; Aouad MT.
[Comparative Study. Journal Article. Randomized Controlled Trial. Research Support, Non-U.S. Gov't]
BACKGROUND: Hypotension after spinal anesthesia for cesarean delivery is common. Previous studies have demonstrated that a crystalloid fluid "coload" (rapid administration of a fluid bolus starting at the time of intrathecal injection) is superior to the conventional crystalloid preload (fluid administered before the intrathecal injection) for preventing hypotension. Colloid preload provides a sustained increase in central blood volume. We hypothesized that, in contrast to crystalloid, a colloid preload may be more effective than colloid coload for reducing the incidence of spinal anesthesia-induced hypotension. METHODS: In this double-blind study, 178 patients were randomly assigned to receive a preload of 500 mL of hydroxyethyl starch over a period of 15-20 min before initiation of spinal anesthesia (n = 90) or an identical fluid bolus of hydroxyethyl starch starting at the time of identification of cerebrospinal fluid (n = 88). Vasopressors (epinephrine or phenylephrine) were administered if systolic arterial blood pressure decreased less than 80% of the baseline pressure and <100 mm Hg, or with smaller decreases in blood pressure if accompanied by nausea, vomiting, or dizziness. The primary outcome was the incidence of hypotension (defined as the administration of at least one dose of vasopressor). RESULTS: There was no significant difference between the groups in the incidence of hypotension (68% in preload group and 75% in coload group, 95% confidence interval of difference -6% to -20%; P = 0.28), doses of epinephrine and phenylephrine, and number of
vasopressor unit doses. The incidence of severe hypotension (systolic blood pressure <80 mm Hg) was 16% in the preload group and 22% in the coload group (P = 0.30). There were no differences in the incidence of nausea and/or vomiting, or neonatal outcome between the groups. CONCLUSION: There was no difference in the incidence of hypotension in women who received colloid administration before the initiation of spinal anesthesia compared with at the time of initiation of anesthesia. Both modalities are inefficient as single interventions to prevent hypotension.

9.

Failure of endtidal carbon dioxide to confirm tracheal intubation in a neonate with a single ventricle and severe pulmonary stenosis.
Siddik-Sayyid SM; Baraka AS; Mokadem FH; Aouad MT.
[Case Reports. Journal Article]

10.

Excellent intubating conditions with remifentanil-propofol and either low-dose rocuronium or succinylcholine.
Siddik-Sayyid SM; Taha SK; Kanazi GE; Chehade JM; Zbeidy RA; Al Alami AA; Zahreddine BW; Khatib MF; Baraka AS; Aouad MT.
[Comparative Study. Journal Article. Randomized Controlled Trial. Research Support, Non-U.S. Gov’t]

PURPOSE: The shortest time to tracheal intubation, the best intubating conditions, and the shortest duration of muscle paralysis are achieved with succinylcholine. During a lidocaine-remifentanil-propofol induction of anesthesia, we compared intubating conditions 90 s after administering low-dose rocuronium (0.3 mg . kg(-1)) with intubating conditions 60 s after administering succinylcholine 1.5 mg . kg(-1). METHODS: The randomized double-blind study included 184 healthy adult patients scheduled for elective surgery. Anesthesia was induced in all patients with lidocaine 1.5 mg . kg(-1), remifentanil 2 microg . kg(-1), and propofol 2 mg . kg(-1) administered over 30 s. In one group, rocuronium 0.3 mg . kg(-1) was administered before the induction sequence, and in the other group, succinylcholine 1.5 mg . kg(-1) was administered after the induction sequence. Laryngoscopy was attempted 90 s after rocuronium administration and 60 s after succinylcholine administration. Intubating conditions were assessed as excellent, good, or poor on the basis of ease of laryngoscopy, position of the vocal cords, and reaction to insertion of the tracheal tube and cuff inflation. RESULTS: There were 92 patients per group. In the rocuronium group, intubating conditions were excellent in 83 patients (90%), good in 8 (9%), and poor in 1 (1%), not significantly different from the intubating conditions in the succinylcholine group, which were excellent in 88 patients (96%), good in 3 (3%), and poor in 1 (1%) (P = 0.3). CONCLUSION: During a lidocaine-remifentanil-propofol induction of anesthesia, rocuronium 0.3 mg . kg(-1) administered before the induction sequence
provides intubating conditions comparable to those achieved with succinylcholine 1.5 mg . kg(-1) administered after the induction sequence.

11.

Pediatric laryngospasm: prevention and treatment. [Review] [127 refs]  
Al-alami AA; Zestos MM; Baraka AS.  
[Journal Article. Review]  
PURPOSE OF REVIEW: The purpose of this review is to discuss the risk factors associated with laryngospasm and the techniques used for prevention and treatment. We also summarize the prevention and treatment modalities in organized algorithms.  
RECENT FINDINGS: According to recent endoscopic studies, laryngospasm is always complete, thus airway management and intravenous therapy are indicated. Parental history of children having upper respiratory infection is associated with increased risk of laryngospasm. Anesthesia administered by a pediatric anesthesiologist is associated with lower incidence of laryngospasm. Intravenous anesthesia is associated with lower incidence of laryngospasm than inhalational anesthesia. In tracheal intubation, the use of muscle relaxants decreases laryngospasm. Deep laryngeal mask airway removal is associated with lower incidence of laryngospasm in sevoflurane or isoflurane anesthesia. In no intravenous line situation, laryngospasm can be treated with succinylcholine administration by intramuscular, intraosseous and intralingual routes.  
SUMMARY: Identifying the risk factors and taking the necessary precautions are the key points in prevention of laryngospasm. An experienced anesthesiologist is associated with lower incidence of laryngospasm. Airway management is the most essential part of treatment of laryngospasm. Drugs can be used as an adjunct in treatment of laryngospasm, especially when anesthesia is administered by beginners. [References: 127]

12.

Severe intra-operative carcinoid crisis in a patient having carcinoid heart disease.  
Yazbek-Karam VG; Haswani RW; Mousallem NM; Abou Jaoude E; Nassar NE; Hirbli KE; El Khoury JM; Tarcha WS; Baraka AS; Aouad MT.  
[Case Reports. Letter]

13.

Bilateral guided cervical block for Zenker diverticulum excision in a patient with ankylosing spondylitis.  
Naja ZM; Al-Tannir MA; Zeidan A; Oweidat M; El-Rajab M; Ziade FM; Baraka AS.  
[Case Reports. Journal Article]
Patients with severe ankylosing spondylitis (AS) have difficulties in tracheal intubation. An 87-year-old man with severe AS was scheduled for Zenker diverticulum (ZD) excision. It was decided to proceed with combined bilateral cervical plexus blockade using a nerve stimulator. The surgery lasted about 3 h, with stable hemodynamics, ECG, and oxygen saturation. The use of a nerve stimulator-guided cervical block minimizes the risk of severe respiratory and/or airway compromise secondary to phrenic nerve or recurrent laryngeal nerve palsy, because it can elicit diaphragmatic muscle response, which helps to avoid the administration of local anesthetic directly to the area of the phrenic nerve, and guides correct needle placement. In conclusion, the nerve stimulator-guided bilateral cervical block in our ZD patient with AS was shown to be a safe and successful alternative anesthetic option.

14.

Comparison of three doses of epidural fentanyl followed by bupivacaine and fentanyl for labor analgesia.
Siddik-Sayyid SM; Taha SK; Azar MS; Hakki MA; Yaman RA; Baraka AS; Aouad MT. Acta Anaesthesiologica Scandinavica. 52(9):1285-90, 2008 Oct. [Comparative Study. Journal Article. Randomized Controlled Trial]

BACKGROUND: Epidural fentanyl 100 microg after lidocaine-epinephrine test dose has been shown to provide adequate analgesia in early labor. This investigation determines the effect of three different bolus doses of epidural fentanyl on duration and quality of analgesia during early first stage of labor. METHODS: In this prospective, double-blind study, 103 laboring nulliparous at cervical dilation <5 cm were enrolled. After an epidural test dose of lidocaine (60 mg) with epinephrine (15 microg), parturients received, randomly, bolus of epidural fentanyl 50, 75, or 100 microg, followed by a continuous infusion of epidural bupivacaine 0.0625% and fentanyl 3 microg/ml at a rate of 10 ml/h. Pain scores and maternal sedation, pruritus, nausea, and vomiting were recorded 10, 20, and 30 min after fentanyl, and every 30 min thereafter until first request for additional analgesia. RESULTS: Adequate analgesia was achieved in 87% (28/32), 94% (35/38), and 94% (31/33) in the fentanyl 50, 75, and 100 microg groups within 20 min. Mean duration of analgesia before re-dosing was significantly longer in fentanyl 100 and 75 microg groups (185.6+/-82.9 and 188.5+/-82.2 min, respectively) as compared with fentanyl 50 microg group (133.6+/-46.2 min, P<0.016). There was no difference in the incidence of maternal side effects or neonatal Apgar scores among the three groups. CONCLUSION: After a test dose of lidocaine-epinephrine, the three epidural fentanyl doses produced similar effective labor analgesia. However, epidural fentanyl 75 microg followed by epidural infusion of dilute bupivacaine and fentanyl produced longer duration of analgesia than fentanyl 50 microg followed by the same infusion, with no further prolongation when the dose of fentanyl was increased up to 100 microg.

15.

Iatrogenic severe hyperglycemia in a child undergoing adenoidectomy and tonsillectomy.
Nasr VG; Dagher WI; Baraka AS. Paediatric Anaesthesia. 18(10):1002-3, 2008 Oct.
A comparison of a silicone wire-reinforced tube with the Parker and polyvinyl chloride tubes for tracheal intubation through an intubating laryngeal mask airway in patients with normal airways undergoing general anesthesia.

Kanazi GE; El-Khatib M; Nasr VG; Kaddoum R; Al-Alami A; Baraka AS; Ayoub CM.


BACKGROUND: The intubating laryngeal mask airway (ILMA) is used in the management of difficult intubation. Usually, a silicone wire-reinforced tube is inserted for tracheal intubation. Because the silicone wire-reinforced tube is expensive, alternatives, such as polyvinyl chloride (PVC) and posterior beveled Parker tubes, are worth considering. We compared the blind intubation success rates among the silicone wire-reinforced tube, the Parker tube, and the PVC tube, and identified laryngeal structures preventing tracheal intubations through the ILMA.

METHODS: Sixty-three adult patients were randomized into three groups: Group I (n = 20) silicone wire-reinforced tube, Group II (n = 21) Parker tube, and Group III (n = 22) PVC tube. Demographic and clinical continuous data were compared with the analysis of variance with the Scheffe test for post hoc analysis. Frequencies and percentages were compared with the chi(2) test. RESULTS: Tracheal intubation was successful from the first attempt in 18 of 20 patients in Group I (silicone wire-reinforced tube), which was significantly higher than the success rate in either Group II (12 of 22 patients) (Parker tube) or Group III (10 of 21 patients) (PVC tube). With clockwise or anticlockwise rotation of the tracheal tube, the number of successful intubations did not change in Group I, but it increased to 19 of 22 patients in Group II and to 12 of 21 patients in Group III. The rate of successful intubation between patients in Group I (90%) and Group II (86%) was not significantly different after manipulation of the tracheal tube (P = 0.72). However, the rate of successful tracheal intubations in patients of Group III (57%) was significantly lower in comparison to patients in both Group I (P = 0.02) and Group II (P = 0.03). In 3 of the 22 patients of Group II and in 9 of the 21 patients of Group III in whom blind intubation was not possible, the obstruction was due to the epiglottis tubercle.

CONCLUSIONS: Manipulation improved the success rate of intubation with the Parker tube through the ILMA rendering it a possible alternative to the silicone wire-reinforced tube.

Recurrent postoperative aspiration following jugular foramen tumor resection.

Al-Alami AA; Kanazi GE; Baraka AS.


We report a 38 year old male patient who underwent a craniotomy for jugular foramen tumor resection. In the postoperative care unit, the patient developed aspiration accompanied with oxyhemoglobin
desaturation. Subsequently, he had several episodes of recurrent aspiration which were attributed to cranial nerves (IX, X) palsy as a complication of the surgery at the jugular foramen. It is suggested that aspiration prophylactic measures should be taken and early assessment of lower cranial nerves function should be done prior to tracheal extubation to decrease post-operative aspiration in patients undergoing base of skull surgery.

18.

Postoperative severe uvular edema following tonsillectomy in a child with a history of obstructive sleep apnea.
Nasr VG; Bitar MA; Chehade JM; Dagher WI; Baraka AS.
[Case Reports. Letter]

19.

Laryngospasm: review of different prevention and treatment modalities. [Review] [71 refs]
Alalami AA; Ayoub CM; Baraka AS.
Paediatric Anaesthesia. 18(4):281-8, 2008 Apr.
[Journal Article. Review]
Laryngospasm is a common complication in pediatric anesthesia. In the majority of cases, laryngospasm is self-limiting. However, sometimes laryngospasm persists and if not appropriately treated, it may result in serious complications that may be life-threatening. The present review discusses laryngospasm with the emphasis on the different prevention and treatment modalities. [References: 71]

20.

Cerebral oximetry during deep hypothermic circulatory arrest.
Baraka AS; Naufal M; El-Khatib M.
[Comment. Letter]

21.

Predistention of the epidural space with saline before catheter insertion.
Siddik-Sayyid SM; Baraka AS.
[Comment. Letter]

22.
Catastrophic cardiac hypokinesis and multiple-organ failure after surgery in a patient with an undiagnosed pheochromocytoma: emergency excision of the tumor.
Siddik-Sayyid SM; Dabbous AS; Shaaban JA; Daaboul DG; Baraka AS. 
[Case Reports. Journal Article]

Noninvasive bilevel positive airway pressure for preoxygenation of the critically ill morbidly obese patient. 
El-Khatib MF; Kanazi G; Baraka AS. 
[Case Reports. Journal Article]
PURPOSE: We describe the use of noninvasive bilevel positive airway pressure (BiPAP) in a critically ill, hypoxemic and morbidly obese patient for preoxygenation prior to rapid sequence induction of anesthesia. CLINICAL FEATURES: A critically ill morbidly obese patient (body mass index: 49 kg.m(-2)) was scheduled for urgent laparoscopic cholecystectomy. Preoxygenation with 5 L.min(-1) oxygen flow resulted in a moderate increase in oxygen saturation (SpO2) from 79% to 90%. Prior to rapid sequence induction of anesthesia, a trial of noninvasive BiPAP with oxygen delivery at 5 L.min(-1) increased his SpO2 to 95% initially, with full saturation of 99% achieved when oxygen flow was increased to 10 L.min(-1). Bilevel positive airway pressure with an inspiratory and expiratory pressures of 17 cm H2O and 7 cm H2O, respectively, was applied using a full face mask to achieve a tidal volume of 8 mL.kg(-1). Rapid sequence induction proceeded uneventfully. CONCLUSIONS: Prior to rapid sequence induction of anesthesia in patients with respiratory compromise secondary to factors which reduce FRC, noninvasive BiPAP in combination with supplemental oxygen may be indicated whenever traditional preoxygenation does not provide adequate oxyhemoglobin saturation. Improved oxygenation is most likely attributable to improved ventilation and alveolar recruitment.

Supplementation of pre-oxygenation in morbidly obese patients using nasopharyngeal oxygen insufflation. 
Baraka AS; Taha SK; Siddik-Sayyid SM; Kanazi GE; El-Khatib MF; Dagher CM; Chehade JM; Abdallah FW; Hajj RE. 
[Journal Article. Randomized Controlled Trial]
During apnoea following induction of anaesthesia, morbidly obese patients may suffer a rapid decrease in oxygen saturation. This study compares pre-oxygenation alone with pre-oxygenation followed by nasopharyngeal oxygen insufflation on the onset of desaturation occurring during the subsequent apnoea. A randomised controlled trial was performed in 34 morbidly obese patients undergoing gastric bypass or gastric band surgery. Seventeen patients
received nasopharyngeal oxygen supplementation following pre-oxygenation (Study group, body mass index = 41.8 (6.9) kg.m(-2)), and the other 17 patients received pre-oxygenation alone (Control group, body mass index = 42.7 (5.4) kg.m(-2)). Time from the onset of apnoea until S(p)o(2) fell to 95% was compared between the two groups with a cut-off of 4 min. In the control group, the S(p)o(2) fell from 100% to 95% during the subsequent apnoea in 145 (27) s, with a significantly negative correlation (r(2) = 0.66, p < 0.05) between the time to desaturation to 95% and the body mass index. In the study group, the S(p)o(2) was maintained in 16 of 17 patients at 100% for 4 min when apnoea was terminated. In conclusion, nasopharyngeal oxygen insufflation following pre-oxygenation in morbidly obese patients delays the onset of oxyhaemoglobin desaturation during the subsequent apnoea.

25.

Multimodal analgesia to prevent propofol-induced pain: pretreatment with remifentanil and lidocaine versus remifentanil or lidocaine alone.
Aouad MT; Siddik-Sayyid SM; Al-Alami AA; Baraka AS.
[Comparative Study. Journal Article. Randomized Controlled Trial. Research Support, Non-U.S. Gov't]
BACKGROUND: Propofol is well-known for its pain on injection. Premixture with lidocaine or pretreatment with remifentanil reduces injection pain. A multimodal approach might offer additional mitigation of propofol injection pain. METHODS: In a randomized, prospective, double-blind study of 156 patients, we compared the incidence and severity of propofol pain among three groups. Patients in the lidocaine group (n = 54) received 2% lidocaine premixed with propofol (40 mg lidocaine in 180 mg propofol). Patients in the remifentanil group (n = 50), received pretreatment with remifentanil 2 microg x kg(-1) IV over 30 s. Patients in the combination group (n = 52) received both lidocaine and remifentanil. RESULTS: A significant decrease in the overall incidence of propofol pain at induction was achieved in the combination group (9.6%) compared with that in the remifentanil group (36%) and the lidocaine group (35%) (P = 0.003). The incidence of severe and moderate pain was also significantly different in the combination group (0%), compared with that in the remifentanil (18%) and lidocaine groups (12.9%) (P < 0.02). Similar, statistically significant differences among the three groups were achieved concerning recalled pain in the postanesthesia care unit. CONCLUSIONS: The combination of two different analgesic modalities, remifentanil and lidocaine completely abolishes moderate and severe pain associated with propofol injection, and significantly reduces the incidence of mild pain when compared with each drug used alone.

26.

Does ondansetron or granisetron prevent subarachnoid morphine-induced pruritus after cesarean delivery?.
Siddik-Sayyid SM; Aouad MT; Taha SK; Azar MS; Hakkı MA; Kaddoum RN; Nasr VG; Yazbek VG; Baraka AS.
BACKGROUND: We compared the efficacy of granisetron and ondansetron for the prevention of subarachnoid morphine-induced pruritus after cesarean delivery. METHODS: The incidence of pruritus was assessed in parturients who were randomly allocated into Group G (granisetron 3 mg IV, n = 45), Group O (ondansetron 8 mg IV, n = 42), and Group S (saline IV, n = 42). RESULTS: The incidence of pruritus was not significantly different among the 3 groups (86.6% in Group S, 83.3% in Group O, and 88% in the Group G). CONCLUSION: Neither prophylactic ondansetron nor granisetron reduced the incidence of subarachnoid morphine-induced pruritus when compared with the saline group.

Can we prevent malignant hyperthermia after hypothermic cardiopulmonary bypass in a malignant hyperthermia-susceptible patient?

Siddik-Sayyid SM; Moussa AR; Baraka AS.


[Case Reports. Comment. Letter]

Haloperidol vs. ondansetron for the prevention of postoperative nausea and vomiting following gynaecological surgery.

Aouad MT; Siddik-Sayyid SM; Taha SK; Azar MS; Nasr VG; Hakki MA; Zoorob DG; Baraka AS.


[Comparative Study. Journal Article. Randomized Controlled Trial. Research Support, Non-U.S. Gov't]

BACKGROUND AND OBJECTIVE: Ondansetron is widely used for the prophylaxis of postoperative nausea and vomiting, while haloperidol is an antiemetic that lacks recent data on efficacy and adverse effects. METHODS: In this prospective, randomized, double-blinded study involving 93 females undergoing gynaecological procedures under general anaesthesia, we compared the efficacy and adverse effects of prophylactic haloperidol 1 mg intravenous and ondansetron 4 mg intravenous vs. placebo. RESULTS: During the overall observation period (0-24 h), in the haloperidol, ondansetron and placebo groups respectively, the incidence of nausea and/or vomiting was 40.7% (11/27), 48.2% (13/27) and 55.5% (15/27), and the need of rescue antiemetics was 22.2% (6/27), 44.4% (12/27) and 40.7% (11/27), with P values >0.05 among the three groups. During the early observation period (0-2 h), in the haloperidol, ondansetron and placebo groups respectively, the incidence of nausea and/or vomiting was 13.7% (4/29), 26.6% (8/30) and 43% (13/30), and the need for rescue antiemetics was 6.8% (2/29), 26.6% (8/30) and 36.6% (11/30). Between haloperidol and placebo groups, the P value was 0.04 for nausea and/or vomiting, and was 0.01 for rescue antiemetics, in addition to lower nausea scores (P = 0.03). During the late observation period (2-24 h), no significant difference was shown among the three groups. CONCLUSION: The prophylactic administration of 1 mg intravenous haloperidol or 4 mg ondansetron, in female patients undergoing gynaecological surgery, did not
improve the overall incidence of nausea and/or vomiting vs. placebo. However, haloperidol 1 mg proved to be an effective antiemetic in the early observation period without significant adverse effects.

29.

The effect of injection of two vs 10 mL saline on the subsequent spread and quality of epidural analgesia in parturients.
Siddik-Sayyid SM; Taha SK; Aouad MT; Daaboul DG; Deeb PG; El Khatib MF; Baraka AS. Journal of Clinical Anesthesia. 18(8):575-9, 2006 Dec.
[Comparative Study. Journal Article. Randomized Controlled Trial]
OBJECTIVE: To determine whether two vs 10 mL of saline injected into the epidural space affects the subsequent spread and quality of epidural analgesia in parturients. DESIGN: Randomized, double-blinded, placebo-controlled study. SETTING: Delivery room. PATIENTS: 105 ASA physical status I and II parturients requesting epidural analgesia. INTERVENTIONS: After identification of the epidural space by the loss-of-resistance technique using normal saline, two mL of saline was then injected into the epidural space in the 2-mL group (n = 53) and 10 mL in the 10-mL group (n = 52). Five minutes after the test dose, patients received 10 mL of bupivacaine (0.1%) with fentanyl two microg mL(-1). MEASUREMENTS: 25 minutes after the initial bolus of bupivacaine and fentanyl, spread of block, subsequent pain relief, and influence of the volume of the injected saline on the ease of epidural catheter insertion and on the incidence of blood vessel trauma and paresthesia were evaluated. RESULTS: The total number of dermatomes blocked for cold and pinprick sensation in the 10-mL group was significantly more than in the 2-mL group (19 [6-29] vs 15 [4-27] for cold sensation, P = 0.000; and 15 [3-29] vs 11.5 [3-26] for pinprick sensation, P = 0.001). However, the visual analog pain scale and need for supplemental analgesia were similar between the two groups. The epidural catheter was easily inserted in 94.2% of the 2-mL group and 100% of the 10-mL group. The incidence of blood vessel trauma was low and the incidence of paresthesia was high without any significant difference between the two groups. CONCLUSIONS: 10 mL saline was associated with a higher total number of dermatomes blocked for both cold and pinprick sensation than the two mL saline. However, the pain relief was adequate in both groups, and two mL saline was as effective as the 10 mL in the ease of catheter insertion and prevention of intravascular cannulation.

30.

Propofol-remifentanil-based anaesthesia vs. sevoflurane-fentanyl-based anaesthesia for immediate postoperative ophthalmic evaluation following strabismus surgery.
Yazbeck-Karam VG; Aouad MT; Bleik JH; Baraka AS. European Journal of Anaesthesiology. 23(9):743-7, 2006 Sep.
[Journal Article. Randomized Controlled Trial]
BACKGROUND AND OBJECTIVE: Following strabismus surgery, immediate postoperative ophthalmic evaluation may be desired. Thus, an anaesthetic technique allowing rapid recovery of ocular motility is required. Saccadic eye movements is a biophysical monitor of ocular motility
and may be used to assess recovery from anaesthesia. The aim of this study is to compare the
time to the recovery of saccadic eye movements in patients, following one of two anaesthetic
techniques: Propofol-remifentanil-based anaesthesia vs. sevoflurane-fentanyl-based anaesthesia.

METHODS: Fifty adult patients undergoing strabismus surgery were randomly assigned to one of two groups: patients in Group R received induction and maintenance of anaesthesia with propofol and remifentanil, while patients in Group S received induction of anaesthesia with propofol and fentanyl and maintenance of anaesthesia with sevoflurane.

Recovery from anaesthesia was measured from the time all anaesthetics were turned off and was assessed every 2 min. Recovery time was attained when patients were able to generate brisk saccadic eye movements. At recovery time, the ophthalmic evaluation was started.

RESULTS: The mean recovery time of saccadic eye movements was significantly shorter in the Group R when compared to the Group S (12.1 +/- 4.3 min vs. 21.5 +/- 4.7 min, respectively, P < 0.0001). More patients in Group S experienced nausea and vomiting postoperatively as compared to Group R (9/25 vs. 2/25, respectively, P = 0.037).

CONCLUSIONS: Propofol-remifentanil-based anaesthesia may be a useful technique in strabismus surgery when immediate postoperative ophthalmic evaluation is desired. When compared to sevoflurane maintenance of anaesthesia, it allows for a more rapid recovery from anaesthesia as judged by recovery of saccadic eye movements and a decreased incidence of postoperative nausea and vomiting.

31.

Lidocaine lollipop for awake fiberoptic bronchoscopy.
Ayoub CM; Baraka AS.
[Letter]

32.

Nasopharyngeal oxygen insufflation following pre-oxygenation using the four deep breath technique.
Taha SK; Siddik-Sayyid SM; El-Khatib MF; Dagher CM; Hakki MA; Baraka AS.
[Journal Article. Randomized Controlled Trial]

This paper evaluates the effectiveness of nasopharyngeal oxygen insufflation following preoxygenation using the four deep breath technique within 30 s, on the onset of haemoglobin desaturation during the subsequent apnoea. Thirty ASA I or II patients were randomly allocated to one of two groups. In the study group (n = 15), pre-oxygenation was followed by insufflation of oxygen at a flow of 5 l.min(-1) via a nasopharyngeal catheter commenced at the onset of apnoea. In the control group, pre-oxygenation was not followed by nasopharyngeal oxygen insufflation (n = 15). In the control group, SpO2 fell to 95% within a mean (SD) apnoea time of 3.65 (1.15) min, whereas in the study group, SpO2 was maintained in all patients at 100% throughout the 6 min of apnoea, at which point apnoea was terminated and positive pressure ventilation commenced. We conclude that nasopharyngeal oxygen insufflation
following pre-oxygenation using the four deep breath technique can delay the onset of haemoglobin desaturation for a significant period of time during the subsequent apnoea.

33.

Preoxygenation during pregnancy in the head-up versus the supine position.
Baraka AS.
Anesthesiology. 104(2):380; author reply 381, 2006 Feb.
[Comment. Letter]

34.

Effect of low-dose dexmedetomidine or clonidine on the characteristics of bupivacaine spinal block.
Kanazi GE; Aouad MT; Jabbour-Khoury SI; Al Jazzer MD; Alameddine MM; Al-Yaman R; Bulbul M; Baraka AS.
[Comparative Study. Journal Article. Randomized Controlled Trial]
BACKGROUND: The purpose of this study was to compare the onset and duration of sensory and motor block, as well as the hemodynamic changes and level of sedation, following intrathecal bupivacaine supplemented with either dexmedetomidine or clonidine.
METHODS: In a prospective, double-blind study, 60 patients undergoing transurethral resection of prostate or bladder tumor under spinal anesthesia were randomly allocated to one of three groups. Group B received 12 mg of hyperbaric bupivacaine, group D received 12 mg of bupivacaine supplemented with 3 microg of dexmedetomidine and group C received 12 mg of bupivacaine supplemented with 30 microg of clonidine. The onset times to reach peak sensory and motor levels, and the sensory and motor regression times, were recorded. Hemodynamic changes and the level of sedation were also recorded. RESULTS: Patients in groups D and C had a significantly shorter onset time of motor block and significantly longer sensory and motor regression times than patients in group B. The mean time of sensory regression to the S1 segment was 303 +/- 75 min in group D, 272 +/- 38 min in group C and 190 +/- 48 min in group B (B vs. D and B vs. C, P < 0.001). The regression of motor block to Bromage 0 was 250 +/- 76 min in group D, 216 +/- 35 min in group C and 163 +/- 47 min in group B (B vs. D and B vs. C, P < 0.001). The onset and regression times were not significantly different between groups D and C. The mean arterial pressure, heart rate and level of sedation were similar in the three groups intra-operatively and post-operatively. CONCLUSIONS: Dexmedetomidine (3 microg) or clonidine (30 microg) when added to intrathecal bupivacaine, produces a similar prolongation in the duration of the motor and sensory block with preserved hemodynamic stability and lack of sedation.

35.

Does pancuronium or cisatracurium delay the rate of arousal following remifentanil-based anesthesia?
STUDY OBJECTIVE: The present report investigates the rate of arousal following remifentanil-based anesthesia associated with the coadministration of pancuronium, which inhibits butyrylcholinesterase, or cisatracurium, which is partially metabolized by nonspecific esterases, versus vecuronium that is eliminated independently of ester hydrolysis. DESIGN, SETTING AND PATIENTS: Sixty patients, ASA I-II, scheduled for elective abdominal surgeries were enrolled in a double-blinded prospective study. In fact, patients were equally divided into three Groups with each Group receiving remifentanil and either one of the following three muscle relaxants: pancuronium, vecuronium or cisatracurium. MEASUREMENTS: The rate of arousal following discontinuation of anesthesia was assessed by Modified Aldrete Score. Time to eye opening on verbal command, tracheal extubation, Modified Aldrete Score >9, and time to discharge from the recovery room were recorded. MAIN RESULTS: Time to eye opening on verbal command, tracheal extubation, Modified Aldrete Score >9, and time to discharge from the recovery room were not significantly different between the three groups. CONCLUSION: The results suggest that recovery following remifentanil-based anesthesia is not delayed by the coadministration of pancuronium, cisatracurium versus vecuronium; and by the use of neostigmine for reversal of neuromuscular blockade.

36.

Resistance to cisatracurium in a patient with MELAS syndrome.
Aouad MT; Gerges FJ; Baraka AS.
[Case Reports. Journal Article]
There are conflicting reports on the response of mitochondrial myopathy patients to the neuromuscular blocking drugs, showing either normal response or marked sensitivity. We present a patient with MELAS syndrome who underwent Nissen fundoplication and gastrojejunostomy. Marked resistance to the nondepolarizing muscle relaxant, cisatracurium was observed. The anesthesia management, as well as the various causes of resistance to cisatracurium in this patient are discussed.

37.

Regional cerebral oximetry after oxygen administration.
Baraka AS; Nawfal M; El-Khatib M; Haroun-Bizri S.
[Comment. Letter]

38.

Comparison of three modes of patient-controlled epidural analgesia during labour.
Siddik-Sayyid SM; Aouad MT; Jalbout MI; Zalaket MI; Mouallem MR; Massouh FM; Rizk LB;
BACKGROUND AND OBJECTIVES: This study compares three modes of patient-controlled epidural analgesia in parturients during labour. METHODS: Eighty-four women were randomized to one of three groups. The epidural solution used in all the three groups was 0.1% bupivacaine with fentanyl 2 microg mL(-1). Patients were able to self administer a demand dose of 3 mL with a lockout interval of 6 min in Group A, 6 mL with a lockout interval of 12 min in Group B and 9 mL with lockout interval of 18 min in Group C. All patients received a background infusion at a rate of 6 mL h(-1). Visual analogue pain scores, pinprick analgesia and motor block were assessed hourly by a blinded observer. The physician-administered supplementation and the cumulative dose of bupivacaine were also compared between the three groups. RESULTS: Pain scores, sensory level and motor block were not different among the study groups. Patients' satisfaction was rated good to excellent with no difference among groups. The cumulative dose of bupivacaine was not significantly different. However, there was a trend towards a decreased need for rescue analgesia in Group C. Within each group, the physician-administered supplementations were significantly higher during the second stage of labour than during the first stage (P < 0.05). CONCLUSION: The three modes of patient-controlled epidural analgesia supplemented by a background infusion of 6 mL h(-1) were equally effective for labour analgesia with a trend for decreased rescue analgesia in the group with a larger bolus dose and a longer lockout interval.

A comparison of sevoflurane-propofol versus sevoflurane or propofol for laryngeal mask airway insertion in adults.
Siddik-Sayid SM; Aouad MT; Taha SK; Daaboul DG; Deeb PG; Massouh FM; Muallem MR; Baraka AS.
Anesthesia & Analgesia. 100(4):1204-9, 2005 Apr.
In a prospective, randomized study, we investigated the incidence of successful insertion of laryngeal mask airway (LMA) at the first attempt and the incidence of side effects after LMA insertion using the combination of sevoflurane and propofol as compared with either sevoflurane or propofol alone for induction of anesthesia. Eighty-three unpremedicated ASA physical status I-II patients were anesthetized with a single vital capacity breath (VCB) of sevoflurane 8% supplemented with IV propofol 1.5 mg/kg, a single VCB of sevoflurane 8%, or IV propofol 3 mg/kg. The coinduction technique was associated with the most frequent incidence of successful LMA insertion at the first attempt (93.5%) than either sevoflurane alone (46%) or propofol alone (61.5%) (P < 0.001). Propofol-induced induction of anesthesia allowed the fastest insertion of LMA and was associated with the least frequent incidence of postoperative nausea and vomiting. However, this advantage of propofol was offset by a frequent incidence of pain on injection (69%) and the occurrence of movements during insertion of the LMA (50% in the propofol group versus 19% and 26% in the sevoflurane and...
sevoflurane-propofol groups, respectively; P < 0.05), as well as a more frequent incidence of apnea (84% in the propofol group versus 7% and 16% in the sevoflurane and sevoflurane-propofol groups, respectively; P < 0.001). The report shows that induction of anesthesia with sevoflurane-propofol combined provides a frequent incidence of successful LMA insertion at the first attempt that is associated with an infrequent incidence of apnea.

40.

Prophylactic methylene blue in a patient with congenital methemoglobinemia.
Baraka AS; Ayoub CM; Yazbeck-Karam V; Kaddoum RN; Gerges FJ; Hadi UM; Dagher CM.
[Case Reports. Journal Article. Research Support, Non-U.S. Gov't]
PURPOSE: To report the beneficial effect of prophylactic methylene blue administration before induction of anesthesia in a patient with congenital methemoglobinemia. CLINICAL FEATURES: A 26-yr-old male patient known to have congenital methemoglobinemia was scheduled for turbinectomy under general anesthesia. The patient was clinically cyanotic with a pulse oximetry of 91%. Arterial blood gas analysis showed a partial pressure of oxygen (PaO(2)) of 81.3 mmHg associated with a fractional oxyhemoglobin of 80.7%, and a methemoglobin fraction of 0.159. Preoperative iv administration of 1 mg.kg(-1) of methylene blue resulted, within five minutes, in a decrease of methemoglobin fraction down to 0.05 associated with an increase of the fractional oxyhemoglobin saturation up to 94.7%. After two hours, the methemoglobin fraction decreased to 0.01 and the fractional oxyhemoglobin concentration increased to 97.7%. Induction of anesthesia as well as intraoperative and postoperative course were uneventful without any episode of hypoxemia. Postoperatively, the methemoglobin fractions remained low for 24 hr, to be followed by a gradual increase up to 0.02 on the second day to reach 0.094 on the fifth day. CONCLUSION: The prophylactic preoperative methylene blue administration in a patient with congenital methemoglobinemia significantly decreased the methemoglobin level and increased the fractional oxygen saturation with a consequent increase of the safety margin against perioperative hypoxemia.

41.

Preoperative caudal block prevents emergence agitation in children following sevoflurane anesthesia.
Aouad MT; Kanazi GE; Siddik-Sayyid SM; Gerges FJ; Rizk LB; Baraka AS.
[Clinical Trial. Journal Article. Randomized Controlled Trial]
BACKGROUND: The frequency of emergence agitation in children is increased following sevoflurane anesthesia. However, controversies still exist concerning the exact etiology of this postanesthetic problem. Although this phenomenon is present with adequate pain relief or even following pain-free procedures, pain is still regarded as a major contributing factor.
METHODS: In a prospective, randomized, double-blind study, we enrolled 48 premedicated and calm 2-6-year-old children undergoing inguinal hernia repair. We assigned children to one of two groups: children assigned to the caudal group (n = 24) received a caudal block to
supplement sevoflurane, while children assigned to the fentanyl group (n = 24) received a bolus injection of 1 microg kg(-1) intravenous fentanyl before skin incision to supplement sevoflurane. In the post anesthesia care unit, all children were received by their parent, and the incidence of emergence agitation and pain scores, as well as hemodynamic changes, were compared in both groups. RESULTS: Forty-four children completed the study. In the fentanyl group, 59% of the children were agitated following emergence from anesthesia as compared to 4.5% in the caudal group (P < 0.001). Also, pain scores, mean values of heart rate and blood pressure as well as morphine requirement were significantly higher in the post anesthesia care unit in the fentanyl group compared to the caudal group. CONCLUSION: Our results show that in children undergoing inguinal hernia repair, pain control with a preoperative caudal block as compared to intraoperative intravenous fentanyl significantly reduces the incidence of emergence agitation and pain scores following sevoflurane anesthesia.

42.

End-tidal CO2 for prediction of cardiac output following weaning from cardiopulmonary bypass. Baraka AS; Aoud MT; Jalbout MI; Kaddoum RN; Khatib MF; Haroun-Bizri ST. Journal of Extra-Corporeal Technology. 36(3):255-7, 2004 Sep. [Journal Article]
This prospective study included 32 patients undergoing cardiopulmonary bypass (CPB) for elective coronary artery bypass grafting correlates the respiratory end-tidal CO2 (ETCO2) during partial separation from CPB with cardiac output (CO) following weaning from CPB. After induction of general anesthesia, a pulmonary artery catheter was inserted for measurement of cardiac output by thermodilution. Patients were monitored using a 5-lead ECG, pulse oximeter, invasive blood pressure monitoring, rectal temperature probe, and end-tidal capnography. At the end of surgery, patients were weaned from CPB in a stepwise fashion. Respiratory ETCO2 and in-line venous oximetry were continuously monitored during weaning. The ETCO2 was recorded at quarter pump flow and after complete weaning from CPB. Following weaning from CPB, CO was measured by thermodilution. The CO values were correlated with the ETCO2 during partial bypass and following weaning from bypass. Regression analysis of ETCO2 at quarter-flow and post-bypass CO showed significant correlation (r = 0.57, p < .001). Also, regression analysis of ETCO2 after complete weaning from bypass and post-bypass CO showed significant correlation (r = 0.6, p = .002). The correlation between ETCO2 and CO showed that an ETCO2 >30 mm Hg during partial CPB will always predict an adequate CO following weaning from CPB. An ETCO2 <30 mm Hg may denote either a low or a normal cardiac output and hence other predictive parameters such as SvO2 must be added.

43.

44.

Delayed postoperative arousal following remifentanil-based anesthesia in a myasthenic patient undergoing thymectomy.
Baraka AS; Haroun-Bizri ST; Gerges FJ. Anesthesiology. 100(2):460-1, 2004 Feb.
[Case Reports. Letter]

45.

Methemoglobinemia after a blast injury.
Yazbeck-Karam VG; Aouad MT; Kaddoum RN; Baraka AS. Anesthesiology. 100(2):448-9, 2004 Feb.
[Case Reports. Journal Article]

46.

Continuous paravertebral block for the management of post-thoracotomy pain in a patient undergoing tracheal reconstruction.
Aouad MT; Maalouli JM; Deeb PG; Baraka AS. Middle East Journal of Anesthesiology. 17(3):449-54, 2003 Oct.
[Case Reports. Journal Article]

47.

Oxygenation using tidal volume breathing after maximal exhalation.
Baraka AS; Taha SK; El-Khatib MF; Massouh FM; Jabbour DG; Alameddine MM. Anesthesia & Analgesia. 97(5):1533-5, 2003 Nov.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]

UNLABELLED: We compared, in volunteers, the oxygenation achieved by tidal volume breathing (TVB) over a 3-min period after maximal exhalation with that achieved by TVB alone. Twenty-three healthy volunteers underwent the two breathing techniques in a randomized order. A circle absorber system with an oxygen flow of 10 L/min was used. The end-expiratory oxygen concentration (EEO(2)) was monitored at 15-s intervals up to 3 min. TVB after maximal exhalation produced EEO(2) values of 68% +/- 5%, 75% +/- 5%, and 79% +/- 4% at 30, 45, and 60 s, respectively, which were significantly larger (P < 0.05) than the corresponding values obtained with TVB alone (58% +/- 5%, 66% +/- 6%, and 71% +/- 5%, respectively). In both techniques, the EEO(2) increased exponentially, with time constants of 35 s during TVB after maximal exhalation versus 58 s during TVB without prior maximal exhalation. In conclusion, maximal exhalation before TVB can hasten preoxygenation by decreasing the nitrogen content of the functional residual capacity, with a consequent increase of EEO(2) to approximately 70% in 30 s and 80% in 60 s. IMPLICATIONS: Oxygenation by using maximal exhalation before tidal volume breathing produced a significantly faster increase in end-expiratory oxygen concentration than oxygenation with tidal volume breathing alone.
Laryngeal mask airway for ventilation during diagnostic and interventional fibreoptic bronchoscopy in children.
Yazbeck-Karam VG; Aouad MT; Baraka AS.
[Clinical Trial. Journal Article]
BACKGROUND: The use of the flexible fibreoptic bronchoscope in infants and children has expanded to include both interventional and diagnostic bronchoscopy. The present report utilizes the laryngeal mask airway (LMATM) for ventilation and anaesthesia administration in children during fibreoptic bronchoscopy using an adult bronchoscope. METHODS: The technique was used in 10 children; their age ranged between 1.2 and 5 years. Six of these children had a history of foreign body aspiration and underwent interventional bronchoscopy, while four children underwent diagnostic bronchoscopy. Anaesthesia was induced by facemask using sevoflurane 6-8% followed by the insertion of a LMA size 2 or 2.5. A swivel adapter connected the proximal end of the LMA to the T-piece anaesthesia system. Anaesthesia was then maintained with spontaneous breathing of sevoflurane 2-4% in oxygen, delivered via the LMA. A flexible adult fibreoptic bronchoscope (outer diameter 4.9 mm) was inserted via the swivel adapter. RESULTS: The procedure could be accomplished successfully in the 10 patients. However, one child developed laryngospasm that was easily relieved by deepening the level of anaesthesia. In a second child hypoxia and hypercarbia occurred and were relieved by intermittent withdrawal of the fibreoptic bronchoscope. CONCLUSIONS: Laryngeal mask airway is a safe and effective adjunct to fibreoptic bronchoscopy under general anaesthesia in children. Its larger internal diameter compared with a tracheal tube permits the use of relatively large fibreoptic bronchoscope without a significant increase in airway resistance.

Intravenous lidocaine as adjuvant to sevoflurane anesthesia for endotracheal intubation in children.
Aouad MT; Sayyid SS; Zalaket MI; Baraka AS.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]
IMPLICATIONS: Supplementing a sevoflurane induction of anesthesia in children with IV lidocaine 2 mg/kg can suppress cough after tracheal intubation and thus improve intubating conditions. In addition, lidocaine minimizes blood pressure fluctuations after tracheal intubation.

Hypothermia and excessive sweating following intrathecal morphine in a parturient undergoing cesarean delivery.
Sayyid SS; Jabbour DG; Baraka AS.
OBJECTIVE: Intrathecal morphine has been used for the relief of postoperative pain following cesarean delivery. We report a case of postoperative hypothermia down to 33.6 degrees C associated with excessive sweating in a patient undergoing elective cesarean delivery under spinal bupivacaine anesthesia who received intrathecal morphine for postoperative pain management.

CASE REPORT: A healthy 31-year-old multigravida presented for elective cesarean delivery. Following prehydration with 500 mL hemaccel, she had a subarachnoid block, using hyperbaric bupivacaine 12 mg and morphine 200 microgram, via a 25-gauge Whitacre needle. In the recovery room, 3 hours after induction of spinal anesthesia, the patient’s sublingual temperature was 33.6 degrees C and she was noted to be sedated and sweating excessively. During the next 2 hours, the patient was still hypothermic despite active warming. She also complained of severe nausea, vomiting, and moderate pruritus. Following administration of naloxone 400 microgram sedation, vomiting, and pruritus were relieved. Also, the patient experienced excessive shivering, and her body temperature started to increase in association with a concurrent decrease of sweating. The postoperative hypothermia and excessive sweating in our patient may be related to the cephalad spread of the intrathecal morphine within the cerebrospinal fluid (CSF) to reach the level of opioid receptors in the hypothalamus, causing a perturbation of the thermoregulatory center. This effect could be counteracted by administration of naloxone.

CONCLUSIONS: Intrathecal morphine may cause disruption of thermoregulation resulting in hypothermia associated with excessive sweating.

51.

Alarming hypoxemia during one-lung ventilation in a patient with respiratory bronchiolitis-associated interstitial lung disease.

Baraka AS; Taha SK; Yaacoub CI.


PURPOSE: To report a patient with respiratory bronchiolitis-associated interstitial lung disease (RB-ILD) who developed severe hypoxemia during one-lung ventilation (OLV).

CLINICAL FEATURES: A 27-yr-old female, ex-smoker presented with productive cough and dyspnea of 18-month duration. The chest x-ray revealed diffuse abnormalities involving both lungs consisting of interstitial emphysema with irregular shadowing. Preoperative PaO(2) was 88 mmHg and pulmonary function tests showed moderate obstructive disease. The patient underwent right open lung biopsy. After induction of anesthesia, a left double lumen tube was inserted and its position verified with auscultation and fibreoptic bronchoscopy. Upon initiation of OLV, the patient developed severe hypoxemia and the PaO(2) dropped from 500 mmHg during two-lung ventilation (TLV) to 50 mmHg. Hypoxemia was readily corrected by resuming TLV.

CONCLUSION: The severe hypoxemia during OLV in this patient with RB-ILD may be attributed to impaired hypoxic pulmonary vasoconstriction. Other causes were not excluded. Caution is warranted when initiating OLV in these patients.
52.

A combination of alfentanil-lidocaine-propofol provides better intubating conditions than fentanyl-lidocaine-propofol in the absence of muscle relaxants.

Jabbour-Khoury SI; Dabbous AS; Rizk LB; Abou Jalad NM; Bartelmaos TE; El-Khatib MF; Baraka AS.

Canadian Journal of Anaesthesia. 50(2):116-20, 2003 Feb. [Clinical Trial. Journal Article. Randomized Controlled Trial]

PURPOSE: To compare the ease of tracheal intubation without the use of muscle relaxants following an alfentanil-lidocaine-propofol sequence vs a fentanyl-lidocaine-propofol sequence.

CLINICAL FEATURES: In 80 ASA I and II adult patients undergoing elective laparoscopic surgery, we compared the intubating conditions following alfentanil 20 microg x kg(-1), lidocaine 1.5 mg x kg(-1), propofol 3 mg x kg(-1) (Group I; n = 40) vs fentanyl 2 microg x kg(-1), lidocaine 1.5 mg x kg(-1), propofol 3 mg x kg(-1) (Group II; n = 40). The intubating conditions were scored by jaw relaxation, vocal cord position and response to intubation, as well as by blood pressure and heart rate changes. The intubating conditions were good or excellent in 95% of patients in Group I vs 62.5% of patients in Group II (P < 0.05). Blood pressure decreased from a preinduction value of 86 +/- 13 mmHg to 72 +/- 28 mmHg and 74 +/- 19 mmHg in Group I, and from 85 +/- 12 mmHg to 78 +/- 15 mmHg and 78 +/- 12 mmHg in Group II, one and five minutes following intubation (P < 0.05). This drop in blood pressure was not different between the two groups. CONCLUSION: An alfentanil-lidocaine-propofol sequence offers significantly better intubating conditions than a fentanyl-lidocaine-propofol sequence in healthy adult patients.

53.

Advancing the tracheal tube over a flexible fiberoptic bronchoscope by a sleeve mounted on the insertion cord.

Ayoub CM; Rizk MS; Yaacoub CI; Baraka AS; Lteif AM.


UNLABELLED: The advancement of an endotracheal tube (ETT) over a flexible fiberoptic bronchoscope (FOB) is often impeded at the glottis. This is attributed to the creation of a cleft by the difference in the outer diameter of the fiberscope and the internal diameter of the tube. We designed a conical-shaped polyvinyl chloride sleeve to fit the insertion cord. This report compares the ease of advancement of the tube over a sleeved versus a nonsleeved bronchoscope. General anesthesia was induced, and one anesthesiologist introduced the FOB (a 3.8-mm Olympus LF2). Patients were randomly assigned to undergo tracheal intubation with the regular bronchoscope (25 patients) or the sleeved bronchoscope (25 patients). The FOB was advanced to approximately 1 cm above the carina. A blinded operator advanced the tube over the bronroscope. The ETT was successfully advanced over the nonsleeved bronchoscope into the trachea on the first attempt in 64% of the patients, whereas tracheal intubation succeeded from the first attempt in 96% of patients when the sleeved FOB was used (P < 0.05).
Advancement of the ETT over the fiberscope can be facilitated by using a conically shaped sleeve mounted on the insertion cord. IMPLICATIONS: This report shows that a conical sleeve mounted on the insertion cord of a fiberoptic bronchoscope will facilitate advancing the endotracheal tube into the trachea.

54.

Facilitation of passing the endotracheal tube over the flexible fiberoptic bronchoscope using a Cook airway exchange catheter.
Ayoub CM; Lteif AM; Rizk MS; Abu-Jalad NM; Hadi U; Baraka AS. Anesthesiology. 96(6):1517-8, 2002 Jun. [Journal Article. Research Support, Non-U.S. Gov't]

55.

Intrathecal versus intravenous fentanyl for supplementation of subarachnoid block during cesarean delivery.
Siddik-Sayyid SM; Aouad MT; Jalbout MI; Zalaket MI; Berzina CE; Baraka AS. Anesthesia & Analgesia. 95(1):209-13, table of contents, 2002 Jul. [Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial] UNLABELLED: Forty-eight healthy parturients scheduled for elective cesarean delivery were randomly allocated to receive intrathecally either 12 mg of hyperbaric bupivacaine plus 12.5 microg of fentanyl (n = 23) or bupivacaine alone (n = 25). In the latter group, IV 12.5 microg of fentanyl was administered immediately after spinal anesthesia. We compared the amount of IV fentanyl required for supplementation of the spinal anesthesia during surgery, the intraoperative visual analog scale, the time to the first request for postoperative analgesia, and the incidence of adverse effects. Additional IV fentanyl supplementation amounting to a mean of 32 +/- 35 microg was required in the IV Fentanyl group, whereas no supplementation was required in the Intrathecal Fentanyl group (P = 0.009). The time to the first request for postoperative analgesia was significantly longer in the Intrathecal Fentanyl group than in the IV Fentanyl group (159 +/- 39 min versus 119 +/- 44 min; P = 0.003). The incidence of systolic blood pressure <90 mm Hg and the ephedrine requirements were significantly higher in the IV Fentanyl group as compared with the Intrathecal Fentanyl group (P =0.01). Also, intraoperative nausea and vomiting occurred less frequently in the Intrathecal Fentanyl group compared with the IV Fentanyl group (8 of 23 vs 17 of 25; P = 0.02). IMPLICATIONS: Supplementation of spinal bupivacaine anesthesia for cesarean delivery with intrathecal fentanyl provides a better quality of anesthesia and is associated with a decreased incidence of side effects as compared with supplementation with the same dose of IV fentanyl.

56.

Haemodynamic and EKG changes in patients undergoing minimally invasive direct coronary artery bypass.
BACKGROUND AND OBJECTIVES: The objective of the report is to monitor, in patients undergoing minimally invasive direct coronary artery bypass surgery (MIDCAB), the haemodynamic parameters, ST segment changes and the incidence of arrhythmias during clamping of the coronary artery and following reperfusion. METHODS: Twelve patients scheduled for elective MIDCAB surgery during isoflurane anesthesia were enrolled in the study. Patients were monitored by a pulmonary artery thermodilution catheter, an arterial line and 5 leads ECG. The different haemodynamic parameters, the ST segment changes, as well as the occurrence of arrhythmias during coronary clamping and ten minutes following reperfusion were compared to the control values. RESULTS: No significant changes in the cardiac index followed clamping of the coronary artery. However, the ST segment was significantly elevated. Following coronary reperfusion, the ST segment recovered to the baseline values, and the cardiac index significantly increased more than the baseline value (3.5 +/- 1.1 l/min/m² vs 2.6 +/- 0.7 l/min/m²). However, reperfusion was associated with multiple ventricular extrasystoles in four patients. The elevation of the ST segments during coronary clamping was higher in the four patients who developed reperfusion arrhythmias (0.9 +/- 0.4 mm); one of the patients had preoperative frequent VPBs, two patients had history of unstable angina, while the fourth patient had 70% proximal stenosis of the LAD and recent myocardial infarction. CONCLUSIONS: Coronary occlusion in patients undergoing MIDCAB can result in ST segment elevation, followed by reperfusion ventricular extrasystoles. The reperfusion arrhythmias were observed in patients showing a significant elevation of the ST segment during coronary occlusion; risk factors included a preoperative history of arrhythmia, unstable angina, recent MI, and/or 70% LAD stenosis. The rapid restoration of the control ST segment level and the significant increase of cardiac output following coronary reperfusion suggest that isoflurane anesthesia may have provided a degree of myocardial protection during coronary clamping and reperfusion.

57.

Recurrent episodes of Horner’s syndrome following epidural anesthesia in the obstetrical patients.
Yazbeck-Karam VG; Aouad MT; Baraka AS.
[Case Reports. Journal Article]

58.

Severe oxyhemoglobin desaturation during induction of anesthesia in a patient with congenital methemoglobinemia.
Baraka AS; Ayoub CM; Kaddoum RN; Maalouli JM; Chehab IR; Hadi UM.
Anesthesiology. 95(5):1296-7, 2001 Nov.
[Case Reports. Journal Article]
59.

Rapacuronium for neuromuscular blockade in two myasthenic patients undergoing trans-sternal thymectomy.
Baraka AS; Taha SK; Rizk MS; Rachid-Chehab I; Jalbout MI; Bizri SH.
[Case Reports. Letter]

60.

Low frequency jet ventilation for stent insertion in a patient with tracheal stenosis.
Baraka AS; Siddik SS; Taha SK; Jalbout MI; Massouh FM.
[Case Reports. Journal Article]
PURPOSE: Evaluate oxygen jet ventilation in a patient with tracheal stenosis undergoing stent insertion. CLINICAL FEATURES: Manual intermittent low frequency oxygen jet ventilation was used during general anesthesia for fibreoptic bronchoscopy and stent insertion in a patient with tracheal stenosis. Oxygen jets were delivered via a Sander's injector adapted to the proximal end of the endotracheal tube on one side, and open to room air on the other side. Adequate oxygenation and carbon dioxide removal were ensured throughout the procedure. CONCLUSION: Low frequency jet ventilation in a patient with tracheal stenosis provided adequate ventilation as well as a non-obstructed field during fibreoptic bronchoscopy and stent insertion.

61.

Diclofenac and/or propacetamol for postoperative pain management after cesarean delivery in patients receiving patient controlled analgesia morphine.
Siddik SM; Aouad MT; Jalbout MI; Rizk LB; Kamar GH; Baraka AS.
[Clinical Trial. Journal Article. Randomized Controlled Trial]
BACKGROUND AND OBJECTIVES: A multimodal approach to postcesarean pain management may enhance analgesia and reduce side effects after surgery. This study evaluates the postoperative analgesic effects of propacetamol and/or diclofenac in parturients undergoing elective cesarean delivery under spinal anesthesia. METHODS: After randomization, 80 healthy parturients received the following: placebo (group M), 100 mg diclofenac rectally every 8 hours (group MD), 2 g propacetamol intravenously every 6 hours (group MP), or a combination of 2 g propacetamol and 100 mg diclofenac (group MDP) as described above. Drugs were administered for 24 hours after surgery. Postoperative pain was controlled with a patient controlled analgesia pump, using morphine. The visual analog scale (VAS) at rest and on coughing, as well as the morphine consumption, were evaluated at 2, 6, and 24 hours postoperatively. Also, the side effects experienced after undergoing the different regimens were
compared. RESULTS: The patients' characteristics did not differ significantly between the 4 groups. VAS score at 2 hours, both at rest and on coughing were lower in group MDP and MD compared with group M (P < .05). At 24 hours, there was still a tendency toward lower pain scores in the groups MDP and MD; however, this difference was only statistically significant at rest between the MDP group and the MP and M groups. Morphine consumption at 2, 6, and 24 hours was lower in the MDP and MD groups compared with the MP and M groups (P < .05). The morphine-sparing effect was higher in groups MDP and MD compared with group MP (57% and 46%, respectively, vs 8.2%, P < .05). The incidence of side effects was similar in all groups. However, the power of the study was too low to permit an evaluation of potential side effects.

CONCLUSION: Diclofenac after cesarean delivery improves analgesia and has a highly significant morphine-sparing effect. We were unable to demonstrate significant morphine-sparing effect of propacetamol or additive effect of propacetamol and diclofenac in this group of patients.

62.

The effect of dexamethasone on postoperative vomiting after tonsillectomy.
Aouad MT; Siddik SS; Rizk LB; Zaytoun GM; Baraka AS.
[Clinical Trial. Journal Article. Randomized Controlled Trial]
UNLABELLED: In this double-blinded, randomized, placebo-controlled study, we assessed the effect of dexamethasone 0.5 mg/kg IV administered preoperatively in 110 children 2-12 yr old, undergoing electrodissection adenotonsillectomy, using a standardized anesthetic technique. The incidence of early and late vomiting, the time to first oral intake, the quality of oral intake, the satisfaction scores, and the duration of IV hydration were compared in both groups. The overall incidence of vomiting, as well as the incidence of late vomiting, was significantly less in the Dexamethasone group as compared with the Saline group (23% and 19% vs 51% and 34%, respectively). The time to first oral intake and the duration of IV hydration were shorter in the Dexamethasone group compared with the Saline group (P < 0.05). The quality of oral intake and the satisfaction scores were better in the Dexamethasone group than in the Saline group (P < 0.05). This report confirms the beneficial effect of IV dexamethasone on both vomiting and oral intake in children undergoing electrodissection adenotonsillectomy. IMPLICATIONS: In this double-blinded, placebo-controlled study, we examined the efficacy of a single dose of dexamethasone 0.5 mg/kg IV on posttonsillectomy vomiting and oral intake in children 2-12 yr old. Dexamethasone significantly decreased the incidence of postoperative vomiting during the first 24 h, shortened the time to the first oral intake and the duration of IV hydration, and improved the quality of oral intake and the satisfaction scores of the patients.

63.

Does pregnancy protect against intrathecal lidocaine-induced transient neurologic symptoms?
Aouad MT; Siddik SS; Jalbout MI; Baraka AS.
[Clinical Trial. Journal Article. Randomized Controlled Trial]
We investigated the incidence of transient neurologic symptoms (TNS) after the use of hyperbaric lidocaine as compared with hyperbaric bupivacaine in patients undergoing cesarean delivery under spinal anesthesia. Two hundred women scheduled for cesarean delivery were randomly allocated to receive spinal anesthesia with 75 mg hyperbaric lidocaine 5% (n = 100) or 12 mg hyperbaric bupivacaine 0.75% (n = 100). Spinal anesthesia was administered to all patients in the sitting position with a 25-gauge Whitacre needle. The level of sensory blockade, time to full recovery, and intraoperative hemodynamic profile were noted in all patients. The patients were interviewed postoperatively for three consecutive days to detect the occurrence of TNS. The incidence of TNS was zero (95% confidence interval 0%--3%) in both the Lidocaine and the Bupivacaine Groups. Our results indicate that the frequency of postoperative TNS does not exceed 3% in patients undergoing cesarean delivery at term using hyperbaric lidocaine 5% or hyperbaric bupivacaine 0.75%.

64.

Hydroxyethylstarch 10% is superior to Ringer's solution for preloading before spinal anesthesia for Cesarean section.
Siddik SM; Aouad MT; Kai GE; Sfeir MM; Baraka AS.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]
PURPOSE: To compare the preloading effect of 500 ml hydroxyethylstarch (HES) 10% with 1 L Lactated Ringer's solution (LR). METHODS: In 40 healthy women undergoing elective Cesarean section HES, 500 ml (n = 20), or LR, IL (n = 20), was administered during 10 min before spinal anesthesia. The incidence of hypotension, (systolic blood pressure < 80% of baseline and < 100 mm Hg), and the amount of ephedrine used to treat it were compared. Also, the incidence of nausea and/or vomiting were recorded. Neonatal outcome was assessed using Apgar scores and umbilical venous and arterial blood gases. RESULTS: The incidence of hypotension was higher in the LR than in HES group (80% vs 40%). Mean minimum systolic blood pressure was lower in the LR than in the HES group (86.1 +/- 12.7 mm Hg vs 99.6 +/- 9.7 mm Hg P < 0.05). Systolic blood pressure < 90 mmHg occurred in two of 20 patients (10%) who received HES vs 11 of 20 patients (55%) who received LR (P < 0.05). More doses of ephedrine were required to treat hypotension in the LR than in the HES group (35.3 +/- 18.4 mg vs 10.6 +/- 8.6 mg; P < 0.05). The incidence of nausea and/or vomiting was lower in the HES than in the crystalloid group. Neonatal outcome was good and similar in both groups. CONCLUSION: Preloading patients undergoing elective Cesarean section with 500 ml HES 10%, decreases the incidence and severity of spinal-induced hypotension more than preloading with 1 L of LR solution.

65.

Neuromuscular interaction of sevoflurane--cisatracurium in a myasthenic patient.
Baraka AS; Taha SK; Kawkabani NI.
[Case Reports. Journal Article]
PURPOSE: To describe the influence of sevoflurane anesthesia on cisatracurium neuromuscular block in a myasthenic patient undergoing thymectomy. CLINICAL FEATURES: A myasthenic patient (Osserman IIB) was managed for one year before surgery with 60 mg pyridostigmine qid, 50 mg immuran tid and 30 mg prednisone therapy. Pyridostigmine was interrupted three months before surgery, and five sessions of plasmapheresis were done within 13 days before surgery. The neuromuscular response was monitored by Datex electromyographic response to train-of-four stimulation of the ulnar nerve. Sevoflurane 4% decreased the T1/C ratio by 20%. Administration of 0.025 mg x kg(-1) cisatracurium, during sevoflurane anesthesia, was followed by complete neuromuscular block for 45 min. Discontinuation of sevoflurane resulted, after 10 min, in recovery of the T which reached T1/C ratio of 50% after 30 min. CONCLUSION: The marked sensitivity of this myasthenic patient to 0.5 x ED95 of cisatracurium can be attributed to potentiation of cisatracurium neuromuscular block by sevoflurane, as evidenced by the reappearance of the first twitch of the train-of-four response 10 min after sevoflurane was discontinued.

66.

Aspiration pneumonia after anesthesia in a patient with a Zenker diverticulum.
Aouad MT; Berzina CE; Baraka AS.
[Case Reports. Journal Article. Research Support, Non-U.S. Gov’t]

67.

Haemostasis-altering drugs and central neuraxial block. [Review] [113 refs]
Aouad MT; Baraka AS.
[Journal Article. Review]
PURPOSE: The purpose of this article is to review the literature concerning the use of epidural and spinal anaesthesia in patient receiving haemostasis-altering drugs, and to provide clear guidelines concerning the safe use of those anaesthetic in this category of patients. SOURCE: Relevant articles identified via a medline search and recommendation issued from consensus conferences were consulted. PRINCIPLE FINDINGS: Bleeding in the spinal canal is a very rare occurrence which makes it difficult to conduct randomised studies. Analysis of published case reports provide insight concerning the associated risk factors that may increase the risk of spinal haematoma. Those risk factors are predominantly, anticoagulation and puncture difficulties. Although many studies are reassuring, zero events does not mean that the risk is zero. Caution is always advised because the consequences of a spinal haematoma are devastating. CONCLUSION: Central neuraxial block should be avoided in fully anticoagulated patients. In partially anticoagulated patient, strict delays should be respected according to the pharmacology of the anticoagulants used, before institution of the central neuraxial block. Manipulation of epidural catheters should not be done unless the level of anticoagulation is low. [References: 113]
Preoxygenation: comparison of maximal breathing and tidal volume breathing techniques.
Baraka AS; Taha SK; Aouad MT; El-Khatib MF; Kawkabani NI.
Anesthesiology. 91(3):612-6, 1999 Sep.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]
BACKGROUND: Preoxygenation with tidal volume breathing for 3-5 min is recommended by Hamilton and Eastwood. This report compares tidal volume preoxygenation technique with deep breathing techniques for 30-60 s. METHODS: The study was conducted in two parts on patients undergoing elective coronary bypass grafting. In the first group (n = 32), each patient underwent all of the following preoxygenation techniques: the traditional technique consisting of 3 min of tidal volume breathing at an oxygen flow of 5 l/min; four deep breaths within 30 s at oxygen flows of 5 l/min, 10 l/min, and 20 l/min; and eight deep breaths within 60 s at an oxygen flow of 10 l/min. The mean arterial oxygen tensions after each technique were measured and compared. In the second group (n = 24), patients underwent one of the following techniques of preoxygenation: the traditional technique (n = 8), four deep breaths (n = 8), and eight deep breaths (n = 8). Apnea was then induced, and the mean times of hemoglobin desaturation from 100 to 99, 98, 97, 96, and 95% were determined. RESULTS: In the first group of patients, the mean arterial oxygen tension following the tidal breathing technique was 392+/−72 mm Hg. This was significantly higher (P<0.05) than the values obtained following the four deep breath technique at oxygen flows of 5 l/min (256+/−73 mm Hg), 10 l/min (286+/−69 mm Hg), and 20 l/min (316+/−67 mm Hg). In contrast, the technique of eight deep breaths resulted in a mean arterial oxygen tension of 369+/−69 mm Hg, which was not significantly different from the value achieved by the traditional technique. In the second group of patients, apnea following different techniques of preoxygenation was associated with a slower hemoglobin desaturation in the eight-deep-breaths technique as compared with both the traditional and the four-deep-breaths techniques. CONCLUSION: Rapid preoxygenation with the eight deep breaths within 60 s can be used as an alternative to the traditional 3-min technique.

Tension pneumothorax complicating jet ventilation via a cook airway exchange catheter.
Baraka AS.
Anesthesiology. 91(2):557-8, 1999 Aug.
[Case Reports. Journal Article. Research Support, Non-U.S. Gov't]

Succinylcholine resistance in a patient with juvenile hyaline fibromatosis.
Baraka AS.
Anesthesiology. 87(5):1250-2, 1997 Nov.
[Case Reports. Journal Article]
Thiopental-rocuronium versus ketamine-rocuronium for rapid-sequence intubation in parturients undergoing cesarean section.
Baraka AS; Sayyid SS; Assaf BA.
Anesthesia & Analgesia. 84(5):1104-7, 1997 May.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]
We investigated the neuromuscular effects and conditions of tracheal intubation after administration of rocuronium in 40 parturients undergoing elective cesarean section. After preoxygenation, anesthesia was induced in 20 patients by thiopental 4 mg/kg and, in the other 20 patients, by ketamine 1.5 mg/kg. Rocuronium 0.6 mg/kg was then administered, and neuromuscular transmission was assessed using electromyographic response to train-of-four stimulation of the ulnar nerve at the wrist every 10 s. The time to T1/control ratio of 50% neuromuscular block (NMB) as well as the time to maximum NMB (onset time) were compared in the two groups. The time to 50% block was 45 +/- 10 s in the thiopental group and 42 +/- 14 s in the ketamine group, while the onset time was 105 +/- 35 s in the thiopental group and 101 +/- 35 s in the ketamine group. Neither the time to 50% NMB nor the onset time were significantly different between the two groups. Tracheal intubation at 50% NMB was easily performed in all patients in the ketamine-rocuronium group but was difficult in 75% of the thiopental-rocuronium group. We concluded that ketamine 1.5 mg/kg followed by rocuronium 0.6 mg/kg may be suitable for rapid-sequence induction of anesthesia in parturients undergoing cesarean section.

72.

Vecuronium neuromuscular block in a patient with Charcot-Marie-Tooth syndrome.
Baraka AS.
[Case Reports. Journal Article]

73.

Transient atrioventricular block after release of aortic cross-clamp.
Baraka AS; Taha SK; Yazbeck VK; Rizkallah PA; Zughbi JP; Aouad MJ; Rouhana CS; Nader AM.
[Journal Article]
To determine the incidence of atrioventricular (A-V) block, 86 patients, aged 58.9 +/- 10.4 yr, undergoing elective coronary artery bypass grafting (CABG) during aortic cross-clamping (ACC) and cold potassium cardioplegia were investigated. The incidence and duration of complete A-V block after release of the aortic cross-clamp was monitored. Twenty-four percent of the patients developed complete A-V block that required temporary pacing for a mean time of 66 +/- 39 min. The volume of cardioplegia used was not significantly different between the patients who developed A-V block and the patients who had no block. The serum potassium level at the time
of release of the aortic cross-clamp was within the normal range in both groups. Six factors were correlated with the development of A-V block: old age, preparation by a combination of beta-adrenergic blockers and calcium channel blockers, preoperative bradycardia, the number of vessels grafted, as well as the duration of ACC. Also, the serum potassium level at the time of release of the aortic cross-clamp was significantly higher in the patients who developed A-V block. The high incidence of A-V block in elderly patients undergoing multiple coronary vessel grafting during a prolonged ACC time suggests that suboptimal myocardial preservation may be the main predisposing factor.

74.

Intravascular administration of polymerized gelatin versus isotonic saline for prevention of spinal-induced hypotension.
Baraka AS; Taha SK; Ghabach MB; Sibaii AA; Nader AM.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]
This report tests the hypothesis that intravascular prehydration with 3% gelatin in electrolyte solution maintains arterial blood pressure after spinal anesthesia better than with an equal volume of isotonic saline solution. Thirty-four patients undergoing elective transurethral resection of the prostate were allocated randomly to receive either 7 mL/kg of isotonic saline 0.9% (17 patients) or 7 mL/kg of 3% gelatin in electrolyte solution (17 patients) before spinal anesthesia. There was a significant increase in central venous pressure in the gelatin group without any significant change in the isotonic saline group. After spinal anesthesia, the mean systolic blood pressure significantly decreased in both groups; however, the incidence of systolic blood pressure greater than 75% of control value was higher in the gelatin group (15/17) than in the normal saline group (9/17). Also, the mean dose of phenylephrine required to maintain arterial blood pressure > 75% of the baseline value was significantly larger in the normal saline group than in the gelatin group. We conclude that prophylactic administration of gelatin is more effective than saline in attenuating spinal anesthesia-induced hypotension.

75.

Effect of alpha-stat versus pH-stat strategy on oxyhemoglobin dissociation and whole-body oxygen consumption during hypothermic cardiopulmonary bypass.
Baraka AS; Baroody MA; Haroun ST; Sibai AA; Nawfal MF; Dabbous AS; Taha SK; el-Khatib RA.
[Clinical Trial. Comparative Study. Journal Article. Randomized Controlled Trial]
To determine whether alpha-stat or pH-stat strategy should be used, 20 patients undergoing coronary artery bypass grafting during moderate hypothermic hemodilutional cardiopulmonary bypass were studied. The carbon dioxide management during bypass was randomly done according to alpha-stat strategy in 10 patients (i.e., temperature-uncorrected PaCO2 was kept near 40 mm Hg and uncorrected pHa was kept at about 7.4) and according to pH-stat strategy in the other 10 patients (i.e., temperature-corrected PaCO2 was kept near 40 mm Hg.
and uncorrected pHa was kept at about 7.4). In both groups, when the central venous temperature was stable at 26.5 +/- 2.5 degrees C, the perfusion flow was altered sequentially from 2.4 to 1.8 and 1.2 L.min^-1.m^-2. The mixed venous oxyhemoglobin saturation at the different perfusion flows was monitored by the Oxy-Stat meter and was correlated with the corresponding mixed venous oxygen tension to construct an oxyhemoglobin dissociation curve. Also, the whole-body oxygen consumption at the different perfusion flows was computed. The whole-body oxygen consumption and the oxyhemoglobin dissociation were not significantly different between the alpha-stat and the pH-stat groups. In both groups, the dissociation curve is shifted to the left, but the oxygen consumption per unit time does not significantly change despite decreasing the perfusion flow from 2.4 to 1.2 L.min^-1.m^-2. The results suggest that oxygen delivery is not impaired during moderate hypothermic cardiopulmonary bypass independent of whether alpha-stat or pH-stat strategy is used.

76.

Preoxygenation of pregnant and nonpregnant women in the head-up versus supine position.
Baraka AS; Hanna MT; Jabbour SI; Nawfal MF; Sibai AA; Yazbeck VG; Khoury NI; Karam KS.
[Comparative Study. Journal Article]
The influence of preoxygenation in the supine (n = 10) versus the 45 degrees head-up (n = 10) position on the duration of apnea leading to a decrease in arterial oxygen saturation to 95%, as monitored by pulse oximetry, was investigated in 20 women undergoing elective cesarean section at term of pregnancy. The results were compared with those obtained in a control group of 20 nonpregnant women. In the supine position, the average time to desaturation to 95% was significantly shorter in the pregnant group (173 +/- 4.8 s [mean +/- SD]) than in the control group of nonpregnant women (243 +/- 7.4 s). Using the head-up position resulted in an increase in the desaturation time in the nonpregnant group (331 +/- 7.2 s) but had no significant effect in the pregnant group (156 +/- 2.8 s). We conclude that pregnant women desaturate their arterial blood of oxygen more rapidly than do nonpregnant women. Furthermore, the head-up position extends the duration of apnea that can take place before desaturation occurs in nonpregnant patients.

77.

Is hypoxic pulmonary vasoconstriction exaggerated during one-lung ventilation in patients with patent ductus arteriosus?
Baraka AS; Taha SK; el-Khatib RA.
[Case Reports. Journal Article]

78.

Autonomous peripheral nerve activity causing generalized muscle stiffness and fasciculations: report of a case with physiological, pharmacological, and morphological observations.
A 14-year-old boy with generalized muscle weakness, stiffness and fasciculations associated with profuse and continuous electromyographic (EMG) activity is described. The spontaneous mechanical and electrical muscle activity was unaffected by sleep, general anesthesia, or spinal anesthesia but was abolished by small doses of curare, succinyl-choline, and gallamine. Proximal and distal peripheral nerve block caused moderate and marked reduction of EMG activity, respectively, thus indicating that the disorder is due to autonomous peripheral nerve activity. The delayed motor nerve conduction velocities and the structural abnormalities seen in some of the myelin sheaths by light and electron microscopic studies on sural nerve biopsy preparations constitute further evidence that the peripheral nerve is the site of abnormality in this disorder. Diphenyl hydantoin and carbamazepine maintenance therapy produced adequate clinical relief.