

# Anaesthesia

## Latest Evidence Newsletter

### May 2017



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<b>May</b>	<b>(13.00)</b>
Fri 26 <sup>th</sup>	<b>Interpreting Statistics</b>
Wed 31 <sup>st</sup>	<b>Critical Appraisal</b>
<b>June</b>	<b>(12.00)</b>
Thurs 1 <sup>st</sup>	<b>Literature Searching</b>
Thurs 8 <sup>th</sup>	<b>Interpreting Statistics</b>
Tues 13 <sup>th</sup>	<b>Critical Appraisal</b>
Thurs 29 <sup>th</sup>	<b>Literature Searching</b>
<b>July</b>	<b>(13.00)</b>
Mon 3 <sup>rd</sup>	<b>Interpreting Statistics</b>
Wed 12 <sup>th</sup>	<b>Critical Appraisal</b>
Fri 21 <sup>st</sup>	<b>Literature Searching</b>
Wed 26 <sup>th</sup>	<b>Interpreting Statistics</b>

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## Updates

### *The Association of Anaesthetists of Great Britain and Ireland (AAGBI)*

Guidelines available on Anaesthesia early view

[AAGBI safer pre-hospital anaesthesia 2017 >](#)

#### Latest News

[Study reveals how Lifebox pulse oximeters lead to patient safety improvement](#) 25 April 2017

[Joint professional guidance on the use of general anaesthesia in young children](#) 18 April 2017

[Taking revalidation forwards: improving the process of relicensing for doctors](#) 13 April 2017

[AAGBI response to The Long-term Sustainability of the NHS](#) 05 April 2017

[The AAGBI calls for a change to the culture around night shift working](#) 16 March 2017

### *NICE National Institute for Health and care Excellence*

[Guidelines for the Provision of Emergency Anaesthesia 2017 \[PDF\]](#) Source: [Royal College of Anaesthetists](#) -08 March 2017

[Effect of different types of anaesthesia on intraoperative blood glucose of diabetic patients: A PRISMA-compliant systematic review and meta-analysis](#) 01 March 2017

[Effectiveness of active and passive warming for the prevention of inadvertent hypothermia in patients receiving neuraxial anaesthesia: A systematic review and meta-analysis of randomized controlled trials](#) 01 May 2017

[Investigating the Efficacy of Dexmedetomidine as an Adjuvant to Local Anaesthesia in Brachial Plexus Block: A Systematic Review and Meta-Analysis of 18 Randomized Controlled Trials](#) 01 March 2017

[Comparison of periarticular anaesthesia with liposomal bupivacaine with femoral nerve block for pain control after total knee arthroplasty: A PRISMA-compliant meta-analysis](#) 01 March 2017



[15.2 Local anaesthesia](#) : [British National Formulary - BNF](#) - 09 May 2017



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[15.1 General anaesthesia](#) : [British National Formulary for Children - BNFC](#) - 09 May 2017



[Drugs used for intravenous anaesthesia](#) : [British National Formulary - BNF](#) - 09 May 2017

## *The Cochrane Library of Systematic Reviews*

[Higher versus lower inspiratory oxygen fraction or targets of arterial oxygenation for adult intensive care patients](#) Online Publication Date: April 2017

[Needle gauge and tip designs for preventing post-dural puncture headache \(PDPH\)](#) Online Publication Date: April 2017

[Preventive opioids for postoperative pain](#) Online Publication Date: April 2017

[Procalcitonin, C-reactive protein, and presepsin for the diagnosis of sepsis in adults and children](#) Online Publication Date: April 2017

[Capnography versus standard monitoring for emergency department procedural sedation and analgesia](#) Online Publication Date: March 2017

[Topical anaesthetics for pain control during repair of dermal laceration](#) Online Publication Date: February 2017

## Journals: Tables of Contents

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### Anaesthesia

**June 2017; Volume 72, Issue 6**

#### **Editorials**

[The effective introduction of Lifebox pulse oximetry to Malawi \(pages 675–677\)](#)

[Current practice for awake fibreoptic intubation - some unanswered questions \(pages 678–681\)](#)

[Should patients be advised not to drive for 4 days after isoflurane anaesthesia? \(pages 682–685\)](#)

#### **Original Articles**

[Lifebox pulse oximeter implementation in Malawi: evaluation of educational outcomes and impact on oxygen desaturation episodes during anaesthesia \(pages 686–693\)](#)

[A prospective cohort study of awake fibreoptic intubation practice at a tertiary centre \(pages 694–703\)](#)

[Long-term outcomes and cost effectiveness of high-dose dexamethasone for cardiac surgery: a randomised trial \(pages 704–713\)](#)

[A pilot study of ultrasound evaluation of gastric emptying in patients with end-stage renal failure: a comparison with healthy controls \(pages 714–718\)](#)

[Evaluation of a flexible bronchoscope prototype designed for bronchoscopy during mechanical ventilation: a proof-of-concept study \(pages 719–728\)](#)

[A randomised trial of peri-operative positive airway pressure for postoperative delirium in patients at risk for obstructive sleep apnoea after regional anaesthesia with sedation or general anaesthesia for joint arthroplasty \(pages 729–736\)](#)

[Pain Assessment in INTensive care \(PAINT\): an observational study of physician-documented pain assessment in 45 intensive care units in the United Kingdom \(pages 737–748\)](#)

[Flow characteristics of Luer and non-Luer spinal needles \(pages 749–754\)](#)

[A national survey of neurological monitoring practice after obstetric regional anaesthesia in the UK \(pages 755–759\)](#)

[The accuracy of timed maximum local anaesthetic dose calculations with an electronic calculator, nomogram, and pen and paper \(pages 760–764\)](#)

## **Review Article**

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## **Statistically Speaking: methodological madness**

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# **Anesthesia & Analgesia**

***May 2017; Volume 124, Issue 5***

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[Personalized Intrathecal Drug Delivery: Models, Targets, and Approaches](#)

## **Editorial**

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[Plasma Transfusion as Bleeding Prophylaxis in the Critically Ill](#)

[The PLAIN Truth: Caring for the Amish: What Every Anesthesiologist Should Know](#)

[Neuraxial Labor Analgesia: Does It Influence the Outcomes of Labor?](#)

[Anesthesiology and New Models of Perioperative Care: What Will Help Move the Needle?](#)

[Women, Minorities, and Leadership in Anesthesiology: Take the Pledge](#)

[The Law of Unintended Consequences Can Never Be Repealed: The Hazards of Random Urine Drug Screening of Anesthesia Providers](#)

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[Surveying the Literature: Synopsis of Recent Key Publications](#)

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[Generative Retrieval Improves Learning and Retention of Cardiac Anatomy Using Transesophageal Echocardiography](#)

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[The Effect of Implementation of Preoperative and Postoperative Care Elements of a Perioperative Surgical Home Model on Outcomes in Patients Undergoing Hip Arthroplasty or Knee...](#)

[Topical Ropivacaine in Prevention of Post-Tonsillectomy Pain in Adults](#)

## **Anesthetic Clinical Pharmacology**

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[A Role for Adrenergic Receptors in the Uterotonic Effects of Ergometrine in Isolated Human Term Nonlaboring Myometrium](#)

## **Pediatric Anesthesiology**

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[A High Preoperative Pain and Symptom Profile Predicts Worse Pain Outcomes for Children After Spine Fusion Surgery](#)

[The Effect of Sedation on Cortical Activation: A Randomized Study Comparing the Effects of Sedation With Midazolam, Propofol, and Dexmedetomidine on Auditory Processing](#)

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## **Geriatric Anesthesia**

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## **Regional Anesthesia and Acute Pain Medicine**

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[Computational and In Vitro Experimental Investigation of Intrathecal Drug Distribution: Parametric Study of the Effect of Injection Volume, Cerebrospinal Fluid Pulsatility, and...](#)

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[Two Cents' Worth from "Pain Killer" Makers Perry Davis & Son](#)

### **Perioperative Medicine Clinical Science**

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[Safety Aspects of Postanesthesia Care Unit Discharge without Motor Function Assessment after Spinal Anesthesia: A Randomized, Multicenter, Semiblinded, Noninferiority, Controlled Trial](#)

[Risk of Epidural Hematoma after Neuraxial Techniques in Thrombocytopenic Parturients: A Report from the Multicenter Perioperative Outcomes Group](#)

### **Anesthesiology Reflections from the Wood Library-Museum**

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[Up-regulation of Intracellular Calcium Handling Underlies the Recovery of Endotoxemic Cardiomyopathy in Mice](#)

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***May 2017; Volume 118, Issue 5***

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[‘Failed supraglottic airway’: an algorithm for suboptimally placed supraglottic airway devices based on videolaryngoscopy](#)

[Critical airways, critical language](#)

[Engaging in risky business: is it time to rethink risk tolerance in anaesthesia?](#)

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[Measuring the anaesthesia clinical learning environment at the department level is feasible and reliable](#)

[Total haemoglobin mass, but not haemoglobin concentration, is associated with preoperative cardiopulmonary exercise testing-derived oxygen-consumption variables](#)

## **Neurosciences And Neuroanaesthesia**

[Burst-suppression ratio underestimates absolute duration of electroencephalogram suppression compared with visual analysis of intraoperative electroencephalogram](#)

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## Latest Evidence: Database Articles

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### **1. Comparative Evaluation of Anesthetic Efficacy of 2% Lidocaine, 4% Articaine, and 0.5% Bupivacaine on Inferior Alveolar Nerve Block in Patients with Symptomatic Irreversible Pulpitis: A Prospective, Randomized, Double-blind Clinical Trial.**

**Author(s):** Aggarwal, Vivek; Singla, Mamta; Miglani, Sanjay

**Source:** Journal of oral & facial pain and headache; ; vol. 31 (no. 2); p. 124-128

**Abstract:** AIMSTo compare the anesthetic efficacy of 1.8 mL of 2% lidocaine with 1:200,000 epinephrine, 4% articaine with 1:100,000 epinephrine, and 0.5% bupivacaine with 1:200,000 epinephrine on producing inferior alveolar nerve block (IANB) in patients with symptomatic irreversible pulpitis [abstract edited]

### **2. Comparison of periarticular anesthesia with liposomal bupivacaine with femoral nerve block for pain control after total knee arthroplasty: A PRISMA-compliant meta-analysis**

**Author(s):** Liu S.-Q.; Chen X.; Yu C.-C.; Weng C.-W.; Wu Y.-Q.; Xiong J.-C.; Xu S.-H.

**Source:** Medicine (United States); 2017; vol. 96 (no. 13)

**Abstract:** Background: Periarticular anesthesia (PAI) with liposomal bupivacaine (LB) and femoral nerve block (FNB) were 2 common type of pain management after total knee arthroplasty (TKA). There is no consensus about PAI with LB shows better clinical outcome than FNB. Thus, we performed a systematic review and meta-analysis to compare the efficacy and safety of PAI with LB and FNB for patients prepared for TK. [abstract edited]

### **3. Effect of different types of anesthesia on intraoperative blood glucose of diabetic patients: A PRISMA-compliant systematic review and meta-analysis**

**Author(s):** Li X.; Wang J.; Chen K.; Li Y.; Wang H.; Mu Y.; Chen Y.

**Source:** Medicine (United States); 2017; vol. 96 (no. 13)

**Abstract:**Background: Systematic review which analyzes the impact of different anesthesia on intraoperative blood glucose levels of diabetes patients. [abstract edited]

### **4. A Flawed Meta-analysis? Similar Risk of Cardiopulmonary Adverse Events Between Propofol and Traditional Anesthesia for Gastrointestinal Endoscopy**

**Author(s):** Hoaglin D.C.

**Source:** Clinical Gastroenterology and Hepatology; 2017

### **5. Midazolam vs. Meperidine plus Bupivacaine as spinal anaesthesia in woman undergoing caesarean surgery: Clinical trial study**

**Author(s):** Zakeri H.; Rajabi M.; Hosseinipour A.; Badpa M.; Abdollahi M.; Salehi S.

**Source:** Biomedical Research (India); 2017; vol. 28 (no. 6); p. 2768-2772



**Abstract:** Background: The rate of caesarean section has risen from less than 7% in 1970s to more than 25% in 2003. Objective: Due to the side effects of caesarean operation as well as the vital cares needed in this procedure, the raise in the ratio has expressed the technique as a matter of global concern. [abstract edited]

#### **6. Dexmedetomidine prevent postoperative nausea and vomiting on patients during general anesthesia: A PRISMA-compliant meta analysis of randomized controlled trials**

**Author(s):** Jin S.; Liang D.D.; Chen C.; Zhang M.; Wang J.

**Source:** Medicine (United States); 2017; vol. 96 (no. 1)

**Abstract:**Background: Postoperative nausea and vomiting (PONV) is a frequent complication in postoperative period. The aim of this article was to evaluate the effect of dexmedetomidine on PONV. [abstract edited]

#### **7. The effects of intravenous dexmedetomidine injections on IOP in general anesthesia intubation: A meta-analysis**

**Author(s):** Zhou C.; Liu Z.; Ruan L.; Zhu Y.

**Source:** BioMed Research International; 2017; vol. 2017

Available in full text at [BioMed Research International](#) - from EBSCOhost

**Abstract** Objective. The aim of this meta-analysis is to evaluate the effects of dexmedetomidine on intraocular pressure (IOP) in patients with general anesthesia administered via intubation [abstract edited]

#### **8. Cervical plexus anesthesia versus general anesthesia for anterior cervical discectomy and fusion surgery: A randomized clinical trial**

**Author(s):** Wang H.; Ma L.; Yang D.; Wang T.; Ding W.; Wang Q.; Zhang L.

**Source:** Medicine (United States); 2017; vol. 96 (no. 7)

**Abstract:** Both general anesthesia (GA) and cervical plexus anesthesia (CPA) can be used for anterior cervical discectomy and fusion (ACDF) surgery. The aim of this study was to evaluate the influence of anesthetic techniques on perioperative mortality and morbidity in patients undergoing cervical surgery. [abstract edited]

#### **9. Comparison of the pro-postoperative analgesia of intraoperative dexmedetomidine with and without loading dose following general anesthesia: A prospective, randomized, controlled clinical trial**

**Author(s):** Fan W.; Zhang J.; Li G.; Zheng Y.; Liu Y.; Yang H.; Sun Y.

**Source:** Medicine (United States); 2017; vol. 96 (no. 7)

**Abstract:** Intraoperative dexmedetomidine (DEX) with or without loading dose is well-established to improve postoperative pain control in patient-controlled analgesia (PCA). This study was designed to compare the pro-analgesia effect between the 2 in patients received general anesthesia [abstract edited]

**10. Effect of conscious sedation versus general anesthesia on early neurological improvement among patients with ischemic stroke undergoing endovascular thrombectomy: A randomized clinical trial**

**Author(s):** Schoonenberger S.; Uhlmann L.; Hacke W.; Schieber S.; Mundiyanapurath S.; Purruicker J.C.; Nagel S.; Klose C.; Pfaff J.; Bendszus M.; Ringleb P.A.; Kieser M.; Mohlenbruch M.A.; Botsel J.

**Source:** Journal of Neurosurgical Anesthesiology; 2017; vol. 29 (no. 2); p. 178

**11. Investigating the efficacy of dexmedetomidine as an adjuvant to local anesthesia in brachial plexus block a systematic review and meta-analysis of 18 randomized controlled trials**

**Author(s):** Hussain N.; Grzywacz V.P.; Ferreri C.A.; Atrey A.; Banfield L.; Shaparin N.; Vydyanathan A.

**Source:** Regional Anesthesia and Pain Medicine; 2017; vol. 42 (no. 2); p. 184-196

**Abstract:** Background and Objectives: Dexmedetomidine has been thought to be an effective adjuvant to local anesthetics in brachial plexus blockade. We sought to clarify the uncertainty that still exists as to its true efficacy. [abstract edited]

**12. The comparison of etomidate and propofol anesthesia in patients undergoing gastrointestinal endoscopy: A systematic review and meta-analysis**

**Author(s):** Ye L.; Xiao X.; Zhu L.

**Source:** Surgical Laparoscopy, Endoscopy and Percutaneous Techniques; 2017; vol. 27 (no. 1); p. 1-7

**Abstract:** Introduction: Etomidate and propofol played an important role in the sedation of patients undergoing gastrointestinal endoscopy. We conducted a systematic review and meta-analysis to compare their efficacy and safety. [abstract edited]

**13. Impact of parental presence during induction of anesthesia on anxiety level among pediatric patients and their parents: a randomized clinical trial.**

**Author(s):** Sadeghi, Afsaneh; Khaleghnejad Tabari, Ahmad; Mahdavi, Alireza; Salarian, Sara; Razavi, Seyed Sajjad

**Source:** Neuropsychiatric disease and treatment; 2017; vol. 12 ; p. 3237-3241

Available in full text at [Neuropsychiatric Disease and Treatment](#) - from National Library of Medicine

**Abstract:** INTRODUCTION Anesthesia induction is a stressful event for children and their parents, and may have potentially harmful consequences on the patient's physiological and mental situation. Stressful anesthesia induction has psychological adverse effects that recur with repeated anesthesia, can lead to increased pediatric discomfort during the recovery period, and may even induce reactionary postoperative behavior. A randomized controlled trial was performed to assess the impact of parental presence during induction of anesthesia (PPIA) on preoperative anxiety of pediatric patients and their parents at three

different times, cooperation of child with anesthesiologist at induction of anesthesia, and parental satisfaction. [abstract edited]

**14. Benefit of general anesthesia monitored by bispectral index compared with monitoring guided only by clinical parameters. Systematic review and meta-analysis.**

**Author(s):** Oliveira, Carlos Rogério Degrandi; Bernardo, Wanderley Marques; Nunes, Victor Moisés

**Source:** Brazilian journal of anesthesiology (Elsevier); 2017; vol. 67 (no. 1); p. 72-84

**Abstract:** BACKGROUNDThe bispectral index parameter is used to guide the titration of general anesthesia; however, many studies have shown conflicting results regarding the benefits of bispectral index monitoring. The objective of this systematic review with meta-analysis is to evaluate the clinical impact of monitoring with the bispectral index parameter. [abstract edited]

**15. Effect of dexmedetomidine in children undergoing general anesthesia with sevoflurane: a meta-analysis.**

**Author(s):** Amorim, Marco Aurélio Soares; Govêia, Catia Sousa; Magalhães, Edno; Ladeira, Luís Cláudio Araújo; Moreira, Larissa Govêia; Miranda, Denismar Borges de

**Source:** Brazilian journal of anesthesiology (Elsevier); 2017; vol. 67 (no. 2); p. 193-198

**Abstract:** BACKGROUND AND OBJECTIVESSevoflurane is often used in pediatric anesthesia and is associated with high incidence of psychomotor agitation. In such cases, dexmedetomidine (DEX) has been used, but its benefit and implications remain uncertain. We assessed the effects of DEX on agitation in children undergoing general anesthesia with sevoflurane.[abstract edited]

**16. Efficacy of prophylactic doses of intravenous nitroglycerin in preventing myocardial ischemia under general anesthesia: A systematic review and meta-analysis with trial sequential analysis**

**Author(s):** Hoshijima H.; Takeuchi R.; Mieda T.; Iwase Y.; Nagasaka H.; Denawa Y.; Mihara T.; Kuratani N.; Shiga T.; Wajima Z.

**Source:** Journal of Clinical Anesthesia; Aug 2017; vol. 40 ; p. 16-22

**Abstract:**Study Objective To evaluate the efficacy of intravenous nitroglycerin (TNG) in preventing intraoperative myocardial ischemia (MI) under general anesthesia. Moreover, we analyzed the hemodynamic changes in heart rate (HR), mean blood pressure (MBP), and pulmonary capillary wedge pressure (PCWP) associated with TNG administration both before and after the induction of anesthesia. [abstract edited]

**17. Influence of the perioperative administration of magnesium sulfate on the total dose of anesthetics during general anesthesia. A systematic review and meta-analysis**

**Author(s):** Rodriguez-Rubio L.; del Pozo J.S.G.; Jordan J.; Nava E.

**Source:** Journal of Clinical Anesthesia; Jun 2017; vol. 39 ; p. 129-138

**Abstract:**Background Magnesium sulfate displays numerous characteristics that make it a useful drug in anesthesiology (N-methyl-D-aspartate receptor antagonist, vasodilator, antiarrhythmic, inhibitor of catecholamine release and of acetylcholine in the terminal motor plate). The perioperative use of this drug as an adjuvant capable of decreasing the required dose of anesthetics, has been proposed. Objectives To assess the influence of intravenous magnesium sulfate administration during general anesthesia on the overall dose of required anesthetics.[abstract edited]

### **18. The effect of desflurane versus propofol anesthesia on postoperative delirium in elderly obese patients undergoing total knee replacement: A randomized, controlled, double-blinded clinical trial**

**Author(s):** Tanaka P.; Lemmens H.J.; Goodman S.; Maloney W.; Huddleston J.; Sommer B.R.

**Source:** Journal of Clinical Anesthesia; Jun 2017; vol. 39 ; p. 17-22

**Abstract:**Study objective The goal of this study was to investigate the incidence of delirium, wake-up times and early post-operative cognitive decline in one hundred obese elderly patients undergoing total knee arthroplasty. [abstract edited]

### **19. Relation between bispectral index measurements of anesthetic depth and postoperative mortality: a meta-analysis of observational studies.**

**Author(s):** Zorrilla-Vaca, Andres; Healy, Ryan J; Wu, Christopher L; Grant, Michael C

**Source:** Canadian journal of anaesthesia = Journal canadien d'anesthesie; Jun 2017; vol. 64 (no. 6); p. 597-607

**Abstract:**INTRODUCTION The association between anesthesia depth and mortality is still controversial. There are a number of narrative reviews on this topic that affirm this association, but their conclusions were based only on qualitative analyses. The aim of this meta-analysis of observational studies was to examine the potential association between depth of anesthesia as a low bispectral index (BIS) and mortality using appropriate quantitative methods.[abstract edited]

### **20. Anaesthesia for electroconvulsive therapy - new tricks for old drugs: a systematic review**

**Author(s):** Stripp T.K.; Olsen N.V.; Jorgensen M.B.

**Source:** Acta Neuropsychiatrica; May 2017 ; p. 1-9

**Abstract:**Objective: The objective of this review is to investigate existing literature in order to delineate whether the use of anaesthesia and timing of seizure induction in a new and optimised way may improve the efficacy of electroconvulsive therapy (ECT).[abstract edited]

### **21. Commentary on "Regional Versus Local Anaesthesia for Haemodialysis Arteriovenous Fistula Formation: A Systematic Review and Meta-analysis"**

**Author(s):** Tordoir J.H.M.

**Source:** European Journal of Vascular and Endovascular Surgery; May 2017; vol. 53 (no. 5); p. 743

## **22. Regional Versus Local Anaesthesia for Haemodialysis Arteriovenous Fistula Formation: A Systematic Review and Meta-Analysis**

**Author(s):** Cerneviciute R.; Sahebally S.M.; Ahmed K.; Murphy M.; Mahmood W.; Walsh S.R.

**Source:** European Journal of Vascular and Endovascular Surgery; May 2017; vol. 53 (no. 5); p. 734-742

**Abstract:**Background Arteriovenous fistula (AVF) formation is the most common vascular access procedure for patients requiring haemodialysis. However, it is associated with high failure rates, influenced by vessel diameter and arterial inflow. Mode of anaesthesia may affect these factors, and subsequently AVF maturation rates. Objective To perform a systematic review and meta-analysis to assess the effect of anaesthesia type for autologous primary radiocephalic or brachiocephalic AVF creation on subsequent fistula failure rates. [abstract edited]

## **23. The application of three-dimensional printing technology in anaesthesia: a systematic review**

**Author(s):** Chao I.; Rachbuch C.; Young J.; Coles-Black J.; Chuen J.; Weinberg L.

**Source:** Anaesthesia; May 2017; vol. 72 (no. 5); p. 641-650

**Abstract:**Three-dimensional printing has rapidly become an easily accessible, innovative and versatile technology, with a vast range of applications across a wide range of industries. There has been a recent emergence in the scientific literature relating to its potential application across a multitude of fields within medicine and surgery; however, its use within anaesthesia has yet to be formally explored. [abstract edited]

## **24. Monitoring the end-tidal concentration of sevoflurane for preventing awareness during anesthesia (MEETS-PANDA): A prospective clinical trial**

**Author(s):** Wang J.; Zhang L.; Huang Q.; Wu G.; Weng X.; Lai Z.; Lin P.

**Source:** International Journal of Surgery; May 2017; vol. 41 ; p. 44-49

**Abstract:**Objective It was hypothesized that monitoring end-tidal sevoflurane (ETS) during endoscopic surgery could reduce the incidence of intraoperative awareness in patients undergoing general anesthesia. Herein, the incidence of intraoperative awareness and other correlative factors was recorded and compared. [abstract edited]

## **25. What is the place of clonidine in anesthesia? Systematic review and meta-analyses of randomized controlled trials**

**Author(s):** Sanchez Munoz M.C.; De Kock M.; Forget P.

**Source:** Journal of Clinical Anesthesia; May 2017; vol. 38 ; p. 140-153

**Abstract:**Study objective A place for clonidine has been suggested for many indications in perioperative medicine. The aim of this systematic review and these meta-analyses is to

systematically, and quantitatively, evaluate these potential indications of clonidine.  
[abstract edited]

**26. Effectiveness of active and passive warming for the prevention of inadvertent hypothermia in patients receiving neuraxial anesthesia: A systematic review and meta-analysis of randomized controlled trials**

**Author(s):** Shaw C.A.; Steelman V.M.; DeBerg J.; Schweizer M.L.

**Source:** Journal of Clinical Anesthesia; May 2017; vol. 38 ; p. 93-104

**Abstract:** Objective Perioperative hypothermia is a common complication of anesthesia that can result in negative outcomes. The purpose of this review is to answer the question: Does the type of warming intervention influence the frequency or severity of inadvertent perioperative hypothermia (IPH) in surgical patients receiving neuraxial anesthesia?  
[abstract edited]

**27. Effects of nimodipine on postoperative delirium in elderly under general anesthesia: A prospective, randomized, controlled clinical trial.**

**Author(s):** Li, Ya-Nan; Zhang, Qi; Yin, Chun-Ping; Guo, Yang-Yang; Huo, Shu-Ping; Wang, Liang; Wang, Qiu-Jun

**Source:** Medicine; May 2017; vol. 96 (no. 19); p. e6849

**Abstract:** Nimodipine is a clinical commonly used calcium antagonistscan lowering the apoptosis rate of hippocampal neuron to reduce the incidence of postoperative cognitive dysfunction (POCD). This study was designed to evaluate the effects of nimodipine on postoperative delirium in elderly under general anesthesia.[abstract edited]

**28. Regional versus local anesthesia for arteriovenous fistula creation in end-stage renal disease: a systematic review and meta-analysis.**

**Author(s):** Ismail, Ammar; Ibrahim Abushouk, Abdelrahman; Bekhet, Amira H; Abunar, Osama; Hassan, Omar; Khamis, Ahmed A; Al-Sayed, Mohamed; Elgebaly, Ahmed

**Source:** The journal of vascular access; May 2017 ; p. 0

Available in full text at [Journal of Vascular Access](#) - from EBSCOhost

**Abstract:** There is a consensus in the literature that regional anesthesia (RA) improves local hemodynamic parameters in comparison to local anesthesia (LA) during arteriovenous fistula (AVF) surgical construction. However, the effects of both techniques on fistula patency and failure rates are still controversial. The aim of this meta-analysis is to synthesize evidence from published randomized trials and observational studies regarding the safety and efficacy of RA versus LA in AVF surgical construction. [abstract edited]

**29. Effects of Epidural Labor Analgesia With Low Concentrations of Local Anesthetics on Obstetric Outcomes: A Systematic Review and Meta-analysis of Randomized Controlled Trials.**

**Author(s):** Wang, Ting-Ting; Sun, Shen; Huang, Shao-Qiang

**Source:** Anesthesia and analgesia; May 2017; vol. 124 (no. 5); p. 1571-1580

Available in full text at [Anesthesia and Analgesia](#) - from Ovid

**Abstract:**BACKGROUND Low concentrations of local anesthetics (LCLAs) are increasingly popular for epidural labor analgesia. The effects of epidural analgesia with low concentrations of anesthetics on the duration of the second stage of labor and the instrumental birth rate, however, remain controversial. A systematic review was conducted to compare the effects of epidural analgesia with LCLAs with those of nonepidural analgesia on obstetric outcomes.[abstract edited]

### **30. Efficacy and safety of inhaled anaesthetic for postoperative sedation during mechanical ventilation in adult cardiac surgery patients: a systematic review and meta-analysis.**

**Author(s):** Spence, J; Belley-Côté, E; Ma, H K; Donald, S; Centofanti, J; Hussain, S; Gupta, S; Devereaux, P J; Whitlock, R

**Source:** British journal of anaesthesia; May 2017; vol. 118 (no. 5); p. 658-669

**Publication Type(s):** Journal Article

**Abstract:**The aim was to evaluate the efficacy and safety of volatile anaesthetic for postoperative sedation in adult cardiac surgery patients through a systematic review and meta-analysis. [abstract edited]

### **31. Effect of remifentanil for general anaesthesia on parturients and newborns undergoing caesarean section: a meta-analysis.**

**Author(s):** Zhang, Yunhui; Lu, Hongmei; Fu, Zheng; Zhang, Huijun; Li, Ye; Li, Wei; Gao, Jingui

**Source:** Minerva anesthesiologica; May 2017

**Abstract:**BACKGROUND The results presented by studies investigating the effect of remifentanil on both parturients and newborns during cesarean section differed significantly. Therefore, we performed a meta-analysis to estimate the effect of remifentanil on these patients.[abstract edited]

### **32. Letter in response to "Lipid emulsion improves survival in animal models of local anesthetic toxicity: a meta-analysis".**

**Author(s):** Hoegberg, Lotte C G; Hoffman, Robert S; Hayes, Bryan D; Lavergne, Valéry; Gosselin, Sophie

**Source:** Clinical toxicology (Philadelphia, Pa.); May 2017 ; p. 1

### **33. Effects of intrathecal dexmedetomidine on shivering after spinal anesthesia for cesarean section: A double-blind randomized clinical trial**

**Author(s):** Nasser K.; Ghadami N.; Nouri B.

**Source:** Drug Design, Development and Therapy; Apr 2017; vol. 11 ; p. 1107-1113

Available in full text at [Drug Design, Development and Therapy](#) - from National Library of Medicine

**Abstract:** Background: Shivering is among the common troublesome complications of spinal anesthesia (SA), and causes discomfort and discontentment in parturients undergoing cesarean sections (CSs). The aim of this study was to investigate the effects of intrathecal dexmedetomidine in the prevention of shivering in those who underwent CS under SA. [abstract edited]

### **34. Dexmedetomidine as an additive to spinal anaesthesia in orthopaedic patients undergoing lower limb surgeries: A randomized clinical trial comparing two different doses of dexmedetomidine**

**Author(s):** Rai A.; Bhutia M.P.

**Source:** Journal of Clinical and Diagnostic Research; Apr 2017; vol. 11 (no. 4)

**Abstract:** Introduction: Use of dexmedetomidine as an additive to spinal anaesthesia is gaining popularity; but there seems to be no clear consensus on the ideal dose to be used. Because of dose related prolongation of duration of motor blockade along with increase in the incidence of side effects of dexmedetomidine namely hypotension and bradycardia, use of higher doses is not recommended. Aim: To evaluate the efficacy of two different doses of dexmedetomidine (3 micro g and 5 micro g) given in combination with 0.5% hyperbaric bupivacaine via intrathecal route with regard to the quality of anaesthesia namely the time to attain highest sensory and motor blockade, side effects of dexmedetomidine and time to first rescue analgesia. [abstract edited]

### **35. Effects of ondansetron on attenuating spinal anesthesia-induced hypotension and bradycardia in obstetric and nonobstetric subjects: A systematic review and meta-analysis**

**Author(s):** Tubog T.D.; Kane T.D.; Pugh M.A.

**Source:** AANA Journal; Apr 2017; vol. 85 (no. 2); p. 113-122

Available in full text at [AANA Journal](#) - from ProQuest

**Abstract:** Hypotension and bradycardia are common adverse effects following spinal anesthesia. Ondansetron has been studied in the attenuation of spinal anesthesia-induced hypotension (SIH) and bradycardia because of its antagonistic effect on the Bezold-Jarisch reflex. The purpose of this systematic review and meta-analysis of randomized controlled trials (RCTs) was to determine the efficacy of intravenous (IV) ondansetron in reducing the incidence of SIH and bradycardia. [abstract edited]

### **36. Efficacy and Safety of Dexmedetomidine as an Adjuvant in Epidural Analgesia and Anesthesia: A Systematic Review and Meta-analysis of Randomized Controlled Trials**

**Author(s):** Zhang X.; Wang D.; Shi M.; Luo Y.G.

**Source:** Clinical Drug Investigation; Apr 2017; vol. 37 (no. 4); p. 343-354

**Abstract:** Background and Objective: Several clinical trials have examined and indicated the usefulness of epidural dexmedetomidine therapy. However, there has been no systematic analysis of the findings of these trials to date. We undertook this systematic review and meta-analysis to investigate the efficacy and safety of epidural dexmedetomidine adjunctive therapy in different surgical procedures. [abstract edited]



### **37. The feasibility of local anesthesia for the surgical treatment of umbilical hernia: a systematic review of the literature**

**Author(s):** Jairam A.P.; Kaufmann R.; Lange J.F.; Muysoms F.; Jeekel J.

**Source:** Hernia; Apr 2017; vol. 21 (no. 2); p. 223-231

**Abstract:** Background: Yearly approximately 4500 umbilical hernias are repaired in The Netherlands, mostly under general anesthesia. The use of local anesthesia has shown several advantages in groin hernia surgery. Local anesthesia might be useful in the treatment of umbilical hernia as well. However, convincing evidence is lacking. We have conducted a systematic review on safety, feasibility, and advantages of local anesthesia for umbilical hernia repair.[abstract edited]

### **38. Prophylactic Pentazocine Reduces the Incidence of Pruritus After Cesarean Delivery Under Spinal Anesthesia With Opioids: A Prospective Randomized Clinical Trial.**

**Author(s):** Hirabayashi, Masato; Doi, Katsushi; Imamachi, Noritaka; Kishimoto, Tomomune; Saito, Yoji

**Source:** Anesthesia and analgesia; Apr 2017

Available in full text at [Anesthesia and Analgesia](#) - from Ovid

**Abstract:** BACKGROUNDThe incidence of pruritus after cesarean delivery under spinal anesthesia with opioids is high, ranging from 50% to 100%. Pruritus is difficult to prevent; however, pentazocine has been shown to be an effective treatment. Despite this, the prophylactic effect of pentazocine on pruritus has not been defined. This randomized double-blind trial aimed to evaluate the effect of intraoperative IV pentazocine on the incidence of opioid-induced pruritus within the first 24 hours after administration of neuraxial opioids.[abstract edited]

### **39. Anesthetic Neuroprotection in Experimental Stroke in Rodents: A Systematic Review and Meta-analysis.**

**Author(s):** Archer, David P; Walker, Andrew M; McCann, Sarah K; Moser, Joanna J; Appireddy, Ramana M

**Source:** Anesthesiology; Apr 2017; vol. 126 (no. 4); p. 653-665

Available in full text at [Anesthesiology](#) - from Ovid

**Abstract:** BACKGROUNDPatients undergoing endovascular therapy for acute ischemic stroke may require general anesthesia to undergo the procedure. At present, there is little clinical evidence to guide the choice of anesthetic in this acute setting. The clinical implications of experimental studies demonstrating anesthetic neuroprotection are poorly understood. Here, the authors evaluated the impact of anesthetic treatment on neurologic outcome in experimental stroke.[abstract edited]

### **40. Effect of anesthesia methods on postoperative major adverse cardiac events and mortality after non-cardiac surgeries: a systematic review and meta-analysis.**

**Author(s):** An, Ran; Pang, Qian-Yun; Chen, Bo; Liu, Hong-Liang

**Source:** Minerva anesthesiologica; Apr 2017

**Abstract:** BACKGROUND Postoperative major adverse cardiac events (MACEs) are the main cause of postoperative mortality, and controversies exist regarding the effects of anesthesia methods on postoperative MACEs and mortality in high-risk cardiac patients after non-cardiac surgeries. [abstract edited]

#### **41. Safety and Efficacy of Volatile Anesthetic Agents Compared With Standard Intravenous Midazolam/Propofol Sedation in Ventilated Critical Care Patients: A Meta-analysis and Systematic Review of Prospective Trials.**

**Author(s):** Jerath, Angela; Panckhurst, Jonathan; Parotto, Matteo; Lightfoot, Nicholas; Wasowicz, Marcin; Ferguson, Niall D; Steel, Andrew; Beattie, W Scott

**Source:** Anesthesia and analgesia; Apr 2017; vol. 124 (no. 4); p. 1190-1199

Available in full text at [Anesthesia and Analgesia](#) - from Ovid

**Abstract:** BACKGROUND Inhalation agents are being used in place of intravenous agents to provide sedation in some intensive care units. We performed a systematic review and meta-analysis of prospective randomized controlled trials, which compared the use of volatile agents versus intravenous midazolam or propofol in critical care units. [abstract edited]

#### **42. Effects of different fresh gas flows with or without a heat and moisture exchanger on inhaled gas humidity in adults undergoing general anaesthesia: A systematic review and meta-analysis of randomised controlled trials.**

**Author(s):** Braz, José R C; Braz, Mariana G; Hayashi, Yoko; Martins, Regina H G; Betini, Marluci; Braz, Leandro G; El Dib, Regina

**Source:** European journal of anaesthesiology; Apr 2017

**Abstract:** BACKGROUND The minimum inhaled gas absolute humidity level is 20 mgH<sub>2</sub>O l for short-duration use in general anaesthesia and 30 mgH<sub>2</sub>O l for long-duration use in intensive care to avoid respiratory tract dehydration. OBJECTIVE The aim is to compare the effects of different fresh gas flows (FGFs) through a circle rebreathing system with or without a heat and moisture exchanger (HME) on inhaled gas absolute humidity in adults undergoing general anaesthesia. [abstract edited]

#### **43. Comparison of cutting and pencil-point spinal needle in spinal anesthesia regarding postdural puncture headache: A meta-analysis.**

**Author(s):** Xu, Hong; Liu, Yang; Song, WenYe; Kan, ShunLi; Liu, FeiFei; Zhang, Di; Ning, GuangZhi; Feng, ShiQing

**Source:** Medicine; Apr 2017; vol. 96 (no. 14); p. e6527

**Abstract:** BACKGROUND Postdural puncture headache (PDPH), mainly resulting from the loss of cerebral spinal fluid (CSF), is a well-known iatrogenic complication of spinal anesthesia and diagnostic lumbar puncture. Spinal needles have been modified to minimize complications. Modifiable risk factors of PDPH mainly included needle size and needle shape. However, whether the incidence of PDPH is significantly different between cutting-point and pencil-point needles was controversial. Then we did a meta-analysis to assess the incidence of PDPH of cutting spinal needle and pencil-point spinal needle. [abstract edited]

#### 44. Systematic review of the systemic concentrations of local anaesthetic after transversus abdominis plane block and rectus sheath block.

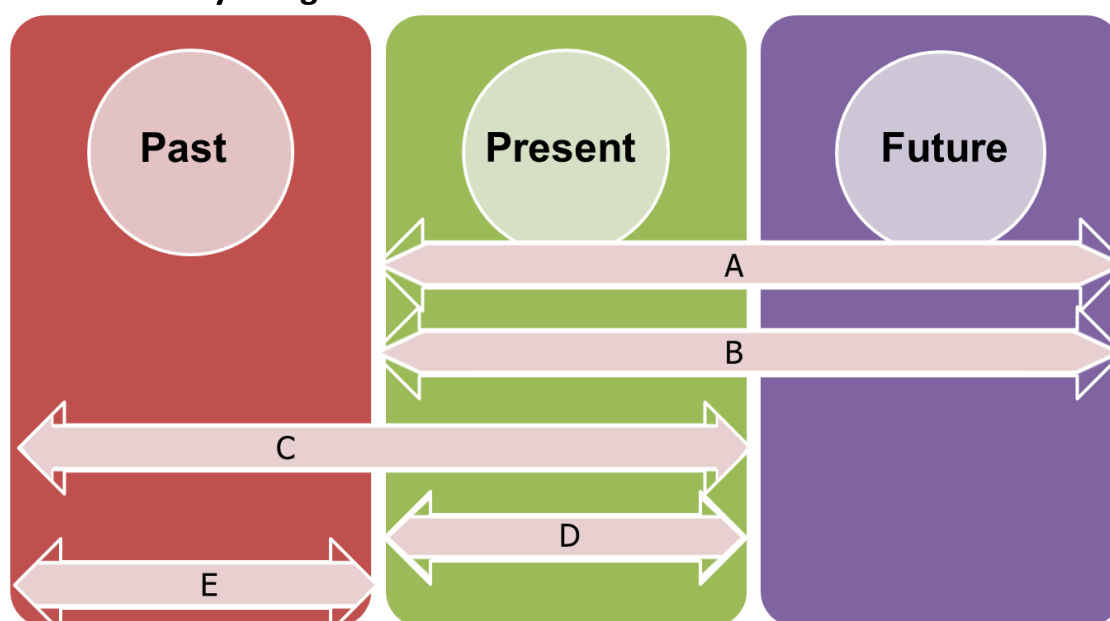
**Author(s):** Rahiri, J; Tuhoe, J; Svirskis, D; Lightfoot, N J; Lirk, P B; Hill, A G

**Source:** British journal of anaesthesia; Apr 2017; vol. 118 (no. 4); p. 517-526

**Abstract:** Background. Safe and efficacious modalities of perioperative analgesia are essential for enhanced recovery after surgery. Truncal nerve blocks are one potential adjunct for analgesia of the abdominal wall, and in recent years their popularity has increased. Transversus abdominis plane block (TAPB) and rectus sheath block (RSB) have been shown to reduce morphine consumption and improve pain relief after abdominal surgery. These blocks typically require large volumes of local anaesthetic (LA). We aimed to synthesize studies evaluating systemic concentrations of LA after perioperative TAP and RSB to enhance our understanding of systemic LA absorption and the risk of systemic toxicity. [abstract edited]

### Exercise: Study Design Timeframes

Match the study design with the timeframe it covers.



1. Randomised Controlled Trial
2. Cross-Sectional Study
3. Case-control Study
4. Cohort Study
5. Case Report

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