

Anaesthesia

Evidence Update

July 2017
(Quarterly)



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Lunchtime Drop-in Sessions

All sessions last one hour

July (13.00-14.00)

3rd (Mon) Interpreting Statistics
12th (Wed) Critical Appraisal
21st (Fri) Literature Searching
26th (Wed) Interpreting Statistics

August (12.00-13.00)

4th (Fri) Critical Appraisal
9th (Wed) Literature Searching
15th (Tues) Interpreting Statistics
24th (Thurs) Critical Appraisal

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Contents

Lunchtime Drop-in Sessions.....	2
Contents.....	3
Updates.....	4
The Association of Anaesthetists of Great Britain and Ireland (AAGBI).....	4
NICE National Institute for Health and care Excellence	4
The Cochrane Library of Systematic Reviews.....	4
Latest Evidence: Database Articles	7
Journals: Tables of Contents	25
Anaesthesia	25
Anesthesia & Analgesia	25
Anesthesiology	25
British Journal of Anaesthesia	25
Current Opinion in Anesthesiology	25
Exercise: Relative Risk.....	27
The Library	28

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Updates

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

[Trainee doctors risking lives in car accidents after night shifts, survey reveals](#) 06 July 2017

[Clean Air statement: Association of Anaesthetists supports the UK's first National Clean Air Day 2017](#) 14 June 2017

[Report says dozens of medical trials may contain inaccurate data](#) 05 June 2017

[New Draft Guideline – Total Intravenous Anaesthesia 2017: guidelines for safe practice – Comments invited from members](#) 24 May 2017

[AAGBI statement in response to attack at the Manchester Arena](#) 23 May 2017

[The AAGBI GAT Committee and the RCoA Trainee Committee launch #KnockItOut](#) 03 May 2017

NICE National Institute for Health and care Excellence

[Anesthesia for patients with mucopolysaccharidoses: Comprehensive review of the literature with emphasis on airway management](#)

Source: [PubMed](#) - 01 May 2017 - Publisher: Journal Of Clinical Anesthesia
[Read Summary](#)

[Guidelines for the Provision of Anaesthesia Services for Pre-operative Assessment and Preparation 2017 \[PDF\]](#)

Source: [Royal College of Anaesthetists](#) - 20 June 2017



[General anaesthesia | Treatment summary](#)

Source: [British National Formulary for Children - BNFC](#) - 20 June 2017



[General anaesthesia | Treatment summary](#)

Source: [British National Formulary - BNF](#) - 20 June 2017

The Cochrane Library of Systematic Reviews

[Interventions for preventing high altitude illness: Part 1. Commonly-used classes of drugs](#)

Online Publication Date: June 2017

[High-flow nasal cannulae for respiratory support in adult intensive care patients](#)

Online Publication Date: May 2017

[Videolaryngoscopy versus direct laryngoscopy for tracheal intubation in children \(excluding neonates\)](#)

Online Publication Date: May 2017

[Avoidance versus use of neuromuscular blocking agents for improving conditions during tracheal intubation or direct laryngoscopy in adults and adolescents](#)

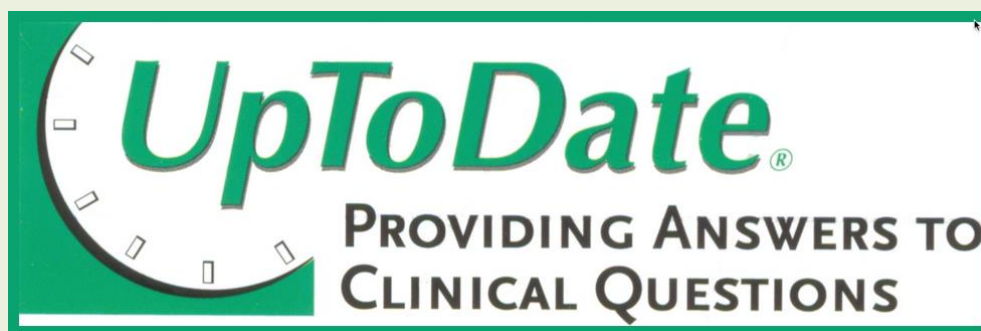
Online Publication Date: May 2017

[Peripheral nerve blocks for hip fractures](#)

Online Publication Date: May 2017

[Higher versus lower inspiratory oxygen fraction or targets of arterial oxygenation for adult intensive care patients](#)

Online Publication Date: April 2017



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Latest Evidence: Database Articles

If you require any of the articles in full please email: library@uhbristol.nhs.uk

1. General vs. neuraxial anaesthesia in hip fracture patients: A systematic review and meta-analysis

Author(s): Van Waesberghe J.; Stevanovic A.; Rossaint R.; Coburn M.

Source: BMC Anesthesiology; Jun 2017; vol. 17 (no. 1)

Publication Type(s): Article

Available in full text at [BMC Anesthesiology](#) - from National Library of Medicine

Abstract:Background: Hip fracture is a trauma of the elderly. The worldwide number of patients in need of surgery after hip fracture will increase in the coming years. The 30-day mortality ranges between 4 and 14%. Patients' outcome may be improved by anaesthesia technique (general vs. neuraxial anaesthesia). There is a dearth of evidence from randomised studies regarding to the optimal anaesthesia technique. However, several large non-randomised studies addressing this question have been published from the onset of 2010. [ABSTRACT EDITED]

2. Intravenous dexmedetomidine during spinal anaesthesia for caesarean section: A meta-analysis of randomized trials

Author(s): Bao Z.; Zhou C.; Zhu Y.; Wang X.

Source: Journal of International Medical Research; Jun 2017; vol. 45 (no. 3); p. 924-932

Publication Type(s): Article

Available in full text at [Journal of International Medical Research](#) - from Highwire Press

Abstract:Objective: To evaluate the efficacy and safety of spinal anaesthesia using dexmedetomidine for caesarean section. Methods: PubMed, The Cochrane Library, and CNKI were searched for relevant literature. Results: The incidence of nausea and vomiting in the dexmedetomidine group was significantly lower than that in the control group (OR = 0.21, 95% CI: 0.12-0.35, P Copyright © 2017, © The Author(s) 2017.

3. Effects of dexmedetomidine versus midazolam for premedication in paediatric anaesthesia with sevoflurane: A meta-analysis

Author(s): Feng J.-F.; Wang X.-X.; Lu Y.-Y.; Pang D.-G.; Peng W.; Mo J.-L.

Source: Journal of International Medical Research; Jun 2017; vol. 45 (no. 3); p. 912-923

Publication Type(s): Article

Available in full text at [Journal of International Medical Research](#) - from Highwire Press

Abstract:Background: Dexmedetomidine (DEX), an alpha2-adrenergic receptor agonist, produces ideal sedation and early postoperative recovery for premedication in paediatric surgery, reducing preoperative anxiety and facilitating smooth induction of anaesthesia. We

performed a meta-analysis to compare the effects of DEX and midazolam (MDZ) in paediatric anaesthesia with sevoflurane. **[ABSTRACT EDITED]**

4. Laparoscopic cholecystectomy under neuraxial anesthesia compared with general anesthesia: Systematic review and meta-analyses

Author(s): Longo M.A.; Cavalheiro B.T.; de Oliveira Filho G.R.

Source: Journal of Clinical Anesthesia; Sep 2017; vol. 41 ; p. 48-54

Publication Type(s): Review

Abstract:Background Pneumoperitoneum during laparoscopic cholecystectomy (LC) can cause hypercapnia, hypoxemia, hemodynamic changes and shoulder pain. General anesthesia (GA) enables the control of intraoperative pain and ventilation. The need for GA has been questioned by studies suggesting that neuraxial anesthesia (NA) is adequate for LC. Study objective To quantify the prevalence of intraoperative pain and to verify whether evidence on the maintenance of ventilation, circulation and surgical anesthesia during NA compared with GA is consistent. **[ABSTRACT EDITED]**

5. Effects of acupuncture in anesthesia for craniotomy: A meta-analysis

Author(s): Asmussen S.; Maybauer M.O.; Maybauer D.M.; Chen J.D.; Jennings K.; Przkora R.; Fraser J.F.; Toon M.H.

Source: Journal of Neurosurgical Anesthesiology; 2017; vol. 29 (no. 3); p. 219-227

Publication Type(s): Article

Abstract:Background: Acupuncture treatment has been used in China for >2500 years, and at present it is used worldwide as a form of analgesia in patients with acute and chronic pain. Furthermore, acupuncture is regularly used not only as a single anesthetic technique but also as a supplement or in addition to general anesthesia (GA). Objectives: The aim of this systematic review and meta-analysis was to assess the level of evidence for the clinical use of acupuncture in addition to GA in patients undergoing craniotomy. **[ABSTRACT EDITED]**

6. Intraoperative "analgesia nociception index"-guided fentanyl administration during sevoflurane anesthesia in lumbar discectomy and laminectomy: A randomized clinical trial

Author(s): Upton H.D.; Ludbrook G.L.; Wing A.; Sleigh J.W.

Source: Anesthesia and Analgesia; Jul 2017; vol. 125 (no. 1); p. 81-90

Publication Type(s): Article

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

Abstract:BACKGROUND: The "Analgesia Nociception Index" (ANI; MetroDoloris Medical Systems, Lille, France) is a proposed noninvasive guide to analgesia derived from an electrocardiogram trace. ANI is scaled from 0 to 100; with previous studies suggesting that values ≥ 50 can indicate adequate analgesia. This clinical trial was designed to investigate the effect of intraoperative ANI-guided fentanyl administration on postoperative pain, under anesthetic conditions optimized for ANI functioning. **[ABSTRACT EDITED]**

7. Erratum: Nebulization of antiinfective agents in invasively mechanically ventilated adults: A systematic review and meta-analysis (Anesthesiology (2017) 126 (890-908) DOI: 10.1097/ALN.0000000000001570)

Author(s): anonymous

Source: Anesthesiology; Jul 2017; vol. 127 (no. 1); p. 208

Publication Type(s): Erratum

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

Abstract:In th article beginning on page 890 in the May 2017 issue, the first sentence of the Competing Interests section is incorrect due to a publisher error. The correct sentence is "Dr. Rello received research grants and consulting fees from Bayer (Leverkusen, Germany) and Genentech (San Francisco, California)." This error has been corrected in the online version of the article. Copyright © 2017, the American Society of Anesthesiologists, Inc. Wolters Kluwer Health, Inc. All Rights Reserved.

8. Neuraxial anesthesia in obstetric patients receiving thromboprophylaxis with unfractionated or low-molecular-weight heparin: A systematic review of spinal epidural hematoma

Author(s): Leffert L.R.; Dubois H.M.; Houle T.T.; Butwick A.J.; Carvalho B.; Landau R.

Source: Anesthesia and Analgesia; Jul 2017; vol. 125 (no. 1); p. 223-231

Publication Type(s): Review

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

Abstract:Venous thromboembolism remains a major source of morbidity and mortality in obstetrics with an incidence of 29.8/100,000 vaginal delivery hospitalizations; cesarean delivery confers a 4-fold increased risk of thromboembolism when compared with vaginal delivery. Revised national guidelines now stipulate that the majority of women delivering via cesarean and women at risk for ante- or postpartum venous thromboembolism receive mechanical or pharmacological thromboprophylaxis. This practice change has important implications for obstetric anesthesiologists concerned about the risk of spinal epidural hematoma (SEH) among anticoagulated women receiving neuraxial anesthesia. **[ABSTRACT EDITED]**

9. Safety of non-anesthesia provider administered propofol sedation in non-advanced gastrointestinal endoscopic procedures: A meta-analysis

Author(s): Gouda B.; Gouda G.; Singh A.; Borle A.; Singh P.M.; Sinha A.

Source: Saudi Journal of Gastroenterology; 2017; vol. 23 (no. 3); p. 133-143

Publication Type(s): Review

Available in full text at [Saudi Journal of Gastroenterology](#) - from ProQuest

Abstract:Background/Aims: The aim of the study was to evaluate the safety of non-anesthesia provider (NAPP) administered propofol sedation in patients undergoing non-advanced gastrointestinal (GI) endoscopic procedures. **[ABSTRACT EDITED]**

10. Xenon as an Adjuvant to Propofol Anesthesia in Patients Undergoing Off-Pump Coronary Artery Bypass Graft Surgery: A Pragmatic Randomized Controlled Clinical Trial

Author(s): Al tmimi L.; Devroe S.; Dewinter G.; van de Velde M.; Poortmans G.; Meyns B.; Meuris B.; Coburn M.; Rex S.

Source: Anesthesia and Analgesia; Jun 2017

Publication Type(s): Article In Press

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

Abstract:BACKGROUND:: Xenon was shown to cause less hemodynamic instability and reduce vasopressor needs during off-pump coronary artery bypass (OPCAB) surgery when compared with conventionally used anesthetics. As xenon exerts its organ protective properties even in subanesthetic concentrations, we hypothesized that in patients undergoing OPCAB surgery, 30% xenon added to general anesthesia with propofol results in superior hemodynamic stability when compared to anesthesia with propofol alone.

[ABSTRACT EDITED]

11. Prophylactic pentazocine reduces the incidence of pruritus after cesarean delivery under spinal anesthesia with opioids: A prospective randomized clinical trial

Author(s): Hirabayashi M.; Doi K.; Imamachi N.; Kishimoto T.; Saito Y.

Source: Anesthesia and Analgesia; Jun 2017; vol. 124 (no. 6); p. 1930-1934

Publication Type(s): Review

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

Abstract:BACKGROUND: The 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]

12. Does preoperative anxiety felt by patients requested to participate in clinical trials related to general anesthesia before elective surgery depend on temperament?

Author(s): Oh J.H.; Shin W.J.; Park S.; Kim K.H.

Source: Korean Journal of Anesthesiology; 2017; vol. 70 (no. 3); p. 277-291

Publication Type(s): Article

Available in full text at [Korean Journal of Anesthesiology](#) - from National Library of Medicine

Abstract:Background: Preoperative anxiety may differ according to patient temperament. It will be increased when patients are requested to participate in a study involving anesthesia. The purpose of this study was to show that the anxiety felt when patients are requested to participate may differ according to temperament in both patients who agree and disagree to participate. [ABSTRACT EDITED]

13. Comparison of LMA Supreme™ with i-gel™ and LMA ProSeal™ in children for airway management during general anaesthesia: A meta-analysis of randomized controlled trials

Author(s): Bhattacharjee S.; Som A.; Maitra S.

Source: Journal of Clinical Anesthesia; Sep 2017; vol. 41 ; p. 5-10

Publication Type(s): Article

Abstract: Study objective A few randomized trials have compared LMA Supreme™ with LMA ProSeal™ and i-gel™ in children but their conclusions varied widely. This systematic review and meta analysis has compared the former device with the latter two devices.

[ABSTRACT EDITED]

14. Inhalation versus intravenous anaesthesia for adults undergoing on-pump or off-pump coronary artery bypass grafting: A systematic review and meta-analysis of randomized controlled trials

Author(s): El Dib R.; Botan A.G.; de Oliveira L.D.; Guimaraes Pereira J.E.; Braz L.G.;

Source: Journal of Clinical Anesthesia; Aug 2017; vol. 40 ; p. 127-138

Publication Type(s): Review

Abstract: Study objective To compare the use of inhalation versus intravenous anaesthesia for adults undergoing on-pump or off-pump coronary artery bypass grafting. **[ABSTRACT EDITED]**

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

Author(s): Ismail A.; Elgebaly A.; Abushouk A.I.; Bekhet A.H.; Abunar O.; Hassan O.; Khamis A.A.; Al-Sayed M.

Source: Journal of Vascular Access; 2017; vol. 18 (no. 3); p. 177-184

Publication Type(s): Review

Available in full text at [journal of vascular access \[J Vasc Access\] NLMUID: 100940729, The -](#) 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]**

16. Neuraxial and Combined Neuraxial/General Anesthesia Compared to General Anesthesia for Major Truncal and Lower Limb Surgery: A Systematic Review and Meta-analysis

Author(s): Smith L.M.; Cozowicz C.; Uda Y.; Memtsoudis S.G.; Barrington M.J.

Source: Anesthesia and Analgesia; May 2017

Publication Type(s): Article In Press

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

Abstract: Neuraxial anesthesia may improve perioperative outcomes when compared to general anesthesia; however, this is controversial. We performed a systematic review and meta-analysis using randomized controlled trials and population-based observational studies identified in MEDLINE, PubMed, and EMBASE from 2010 to May 31, 2016. Studies were included for adult patients undergoing major surgery of the trunk and lower extremity that reported: 30-day mortality (primary outcome), cardiopulmonary morbidity, surgical site infection, thromboembolic events, blood transfusion, and resource use. Perioperative outcomes were compared with general anesthesia for the following subgroups: combined neuraxial-general anesthesia and neuraxial anesthesia alone. **[ABSTRACT EDITED]**

17. Low Back Pain in Pregnancy: Investigations, Management, and Role of Neuraxial Analgesia and Anaesthesia: A Systematic Review

Author(s): Sehmbi H.; D'Souza R.; Bhatia A.

Source: Gynecologic and Obstetric Investigation; May 2017

Publication Type(s): Article In Press

Abstract: Background: Low back pain (LBP) is commonly experienced during pregnancy and is often poorly managed. There is much ambiguity in diagnostic work-up, appropriate management and decision-making regarding the use of neuraxial analgesia and anaesthesia during labour and delivery in these patients. This systematic review summarises the evidence regarding investigations, management strategies and considerations around performing neuraxial blocks for pregnant women with LBP. **[ABSTRACT EDITED]**

18. 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

Publication Type(s): Review

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]**

19. 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

Publication Type(s): Note

20. 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)

Publication Type(s): Article

PubMedID: 28353580

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 TKA. **[ABSTRACT EDITED]**

21. 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)

Publication Type(s): Review

PubMedID: 28353577

Abstract:Background: Systematic review which analyzes the impact of different anesthesia on intraoperative blood glucose levels of diabetes patients. Methods:We searched Medline (via PubMed), Embase, Cochrane Library, Web of Science, Wangfang, CNKI, and CBM database through June 2016, included in randomized controlled trial (RCT), about different anesthesia on intraoperative blood glucose levels in patients with diabetes. Two researchers in 1 group independently screened literatures with eligibility criteria, extracted information, and used RevMan5.3 software to perform meta-analysis. **[ABSTRACT EDITED]**

22. 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

Publication Type(s): Article In Press

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]**

23. 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

Publication Type(s): Article In Press

24. 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

Publication Type(s): Review

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. We undertook a systematic review using MEDLINE and EMBASE databases of three-dimensional printing in anaesthesia. We identified eight relevant articles. Due to the paucity of studies, we also completed a narrative review of the applications of three-dimensional printing pertinent to anaesthetic practice that our department are currently exploring, and suggest potential future uses for this technology relevant to our speciality. Copyright © 2017 The Association of Anaesthetists of Great Britain and Ireland

25. 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

Publication Type(s): Article

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]**

26. 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

Publication Type(s): Review

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]**

27. 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

Publication Type(s): Review

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. Design A systematic review of controlled randomized trials and meta-analysis. Data sources An electronic bibliography search in MEDLINE and in the Cochrane Database of Controlled trials (CENTRAL) up to 2015. Study eligibility criteria, participants and interventions Randomized, double-blind trials relating to general anesthesia in elective surgery using intravenous magnesium sulfate that provide information about the anesthetic requirements in ASA I and II patients. **[ABSTRACT EDITED]**

28. 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)

Publication Type(s): Review

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]**

29. 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](http://www.biomedresearchinternational.com) - 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]**

30. 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

Publication Type(s): Article

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]**

31. 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)

Publication Type(s): Article

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. From January 2008 to December 2015, 356 patients who underwent 1-level ACDF for cervical spinal myelopathy were prospectively reviewed. They were assigned to receive GA (group A) and CPA (group B). **[ABSTRACT EDITED]**

32. 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)

Publication Type(s): Article

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. Seventy patients scheduled abdominal surgery under general anesthesia were randomly assigned into 3 groups which were maintained using propofol/remifentanyl/Ringer solution (PRR), propofol/remifentanyl/dexmedetomidine with (PRDw) or without (PRDo) a loading dose of dexmedetomidine before induction. PRDw/o patients displayed a greater Ramsay sedation score measured immediately after surgery. **[ABSTRACT EDITED]**

33. 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): Scho nenberger S.; Uhlmann L.; Hacke W.; Schieber S.; Mundiyanapurath S.; Purrrucker 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

Publication Type(s): Note

34. 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

Publication Type(s): Article

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. Design Prospective randomized trial. Settings Operating room, postoperative recovery area, hospital wards. Patients 100 obese patients (ASA II and III) undergoing primary total knee replacement under general anesthesia with a femoral nerve block catheter. Intervention Patients were prospectively randomized to maintenance anesthesia with either propofol or desflurane. **[ABSTRACT EDITED]**

35. 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

Publication Type(s): Review

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]**

36. 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

Publication Type(s): Review

Available in full text at [Journal of Clinical Anesthesia](#) - from ProQuest

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]**

37. 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

Publication Type(s): Review

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]**

38. 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

Publication Type(s): Article

Available in full text at [Journal of Clinical Anesthesia](#) - from ProQuest

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? Design Systematic review and meta-analysis. Setting Perioperative care areas. Patients Adults undergoing surgery with neuraxial anesthesia. Intervention Perioperative active warming (AW) or passive warming (PW). **[ABSTRACT EDITED]**

39. 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

Publication Type(s): Journal Article

PubMedID: 28489775

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.Sixty patients shceduced spine surgery under general anesthesia were randomly assigned into 2 groups using a random number table: control group (Group C) and nimodipine group (Group N). **[ABSTRACT EDITED]**

40. Clinical trial of local anesthetic protocols for acute pain associated with caustic paste disbudding in dairy calves.

Author(s): Winder, Charlotte B; LeBlanc, Stephen J; Haley, Derek B; Lissemore, Kerry D; Godkin, M Ann; Duffield, Todd F

Source: Journal of dairy science; May 2017

Publication Type(s): Journal Article

PubMedID: 28551190

Available in full text at [Journal of dairy science \[J Dairy Sci\] NLMUID: 2985126R](#) - from EBSCOhost

Abstract:Caustic paste disbudding is becoming more commonplace in North America. A large body of work has examined pain control for cautery disbudding and surgical dehorning, but fewer studies have evaluated pain control for caustic paste disbudding, and results conflict regarding benefits of local anesthesia. **[ABSTRACT EDITED]**

41. Effects of intrathecal dexmedetomidine on shivering after spinal anesthesia for cesarean section: a double-blind randomized clinical trial.

Author(s): Nasser, Karim; Ghadami, Negin; Nouri, Bijan

Source: Drug design, development and therapy; 2017; vol. 11 ; p. 1107-1113

Publication Type(s): Journal Article

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

Abstract:BACKGROUNDShivering 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]**

42. 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

Publication Type(s): Journal Article

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

Abstract:INTRODUCTIONAnesthesia 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. **[ABSTRACT EDITED]**

43. The Humidity in a Low-Flow Dräger Fabius Anesthesia Workstation with or without Thermal Insulation or a Heat and Moisture Exchanger: A Prospective Randomized Clinical Trial.

Author(s): de Oliveira, Sergius A R; Lucio, Lorena M C; Modolo, Norma S P; Hayashi, Yoko; Braz, Mariana G; de Carvalho, Lídia R; Braz, Leandro G; Braz, José Reinaldo C

Source: PloS one; 2017; vol. 12 (no. 1); p. e0170723

Publication Type(s): Journal Article

Available in full text at [PLOS ONE](#) - from National Library of Medicine

Abstract:BACKGROUND During anesthesia, as compared with intensive care, the time of the tracheal intubation is much shorter. An inhaled gas minimum humidity of 20 mgH₂O.L-1 is recommended to reduce the deleterious effects of dry gas on the airways during anesthesia with tracheal intubation. The Fabius GS Premium® anesthesia workstation (Dräger Medical, Lübeck, Germany) has a built-in hotplate to heat gases in the breathing circuit. A heat and moisture exchanger (HME) is used to further heat and humidify the inhaled gas. The humidity of the gases in the breathing circuit is influenced by the ambient temperature. We compared the humidity of the inhaled gases from a low-flow Fabius anesthesia workstation with or without thermal insulation (TI) of the breathing circuit and with or without an HME.

[ABSTRACT EDITED]

44. A Randomized Clinical Trial of Conscious Sedation vs General Anesthesia on Outcomes in Patients Receiving Thrombectomy for Ischemic Stroke.

Author(s): Starke, Robert M; Peterson, Eric C; Komotar, Ricardo J; Connolly, E Sander

Source: Neurosurgery; May 2017; vol. 80 (no. 5); p. N27

Publication Type(s): Journal Article

45. A randomized clinical trial to compare pain levels during three types of oral anesthetic injections and the effect of Dentalvibe® on injection pain in children.

Author(s): Raslan, Nabih; Masri, Reem

Source: International journal of paediatric dentistry; Jun 2017

Publication Type(s): Journal Article

Abstract:BACKGROUND Pain control is of great importance particularly in pediatric dentistry. The Dentalvibe® is a device that delivers vibration to the injection site in order to reduce intraoral injections' pain. AIM The purpose of this study was to compare pain levels caused by three types of anesthesia injections and the effect of the Dentalvibe® on reducing the injection pain. **[ABSTRACT EDITED]**

46. 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]**

47. Evidence appraisal of Seidi J, Ebnerasooli S, Shahsawari S, Nzarian S. The influence of oral ginger before operation on nausea and vomiting after cataract surgery under general anesthesia: a double-blind placebo-controlled randomized clinical trial.: Electron Physician. 2017;9(1):3508-3514.

Author(s): Girard, Nancy

Source: AORN journal; Jun 2017; vol. 105 (no. 6); p. 628-633

Publication Type(s): Journal Article

48. 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. We retrieved randomized controlled trials from MEDLINE, EMBASE, CENTRAL, Web of Science, clinical trials registries, conference proceedings, and reference lists of included articles. Independent reviewers extracted data, including patient characteristics, type of intraoperative anaesthesia, inhaled anaesthetic used, comparator sedation, and outcomes of interest, using pre-piloted forms. **[ABSTRACT EDITED]**

49. 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

Publication Type(s): Meta-analysis Journal Article Review

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]**

50. Perineural Dexmedetomidine Is More Effective Than Clonidine When Added to Local Anesthetic for Supraclavicular Brachial Plexus Block: A Systematic Review and Meta-analysis.

Author(s): El-Boghdadly, Kariem; Brull, Richard; Sehmbi, Herman; Abdallah, Faraj W

Source: Anesthesia and analgesia; Jun 2017; vol. 124 (no. 6); p. 2008-2020

Publication Type(s): Journal Article

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

Abstract:BACKGROUND Clonidine, an α -2 agonist, has long been used as a local anesthetic adjunct with proven efficacy to prolong peripheral nerve block duration. Dexmedetomidine, a newer α -2 agonist, has a more favorable pharmacodynamic and safety profile; however, data comparing its efficacy as an adjunct to that of clonidine are inconsistent. We sought to compare the clinical efficacy of these 2 α -2 agonists by examining their effects on peripheral nerve block characteristics for upper extremity surgery. **[ABSTRACT EDITED]**

51. 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

Publication Type(s): Journal Article

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]**

52. 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

Publication Type(s): Journal Article

Abstract:BACKGROUND AND OBJECTIVES Sevoflurane 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]**

53. Effect of remifentanyl 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

Publication Type(s): Journal Article

Abstract:BACKGROUNDThe 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]**

54. 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

Publication Type(s): Journal Article

55. Reply to Hoegberg et al.: letter in response to "lipid emulsion improves survival in animal models of local anesthetic toxicity: a meta-analysis".

Author(s): Fettiplace, Michael R

Source: Clinical toxicology (Philadelphia, Pa.); May 2017 ; p. 1-2

Publication Type(s): Journal Article

56. Perioperative and anesthesia-related cardiac arrests in geriatric patients: a systematic review using meta-regression analysis.

Author(s): Braghiroli, Karen S; Braz, José R C; Rocha, Bruna; El Dib, Regina; Corrente, José E; Braz, Mariana G; Braz, Leandro G

Source: Scientific reports; Jun 2017; vol. 7 (no. 1); p. 2622

Publication Type(s): Journal Article

Available in full text at [Scientific Reports](#) - from ProQuest

Abstract:The worldwide population is aging, and the number of surgeries performed in geriatric patients is increasing. This systematic review evaluated anesthetic procedures to assess global data on perioperative and anesthesia-related cardiac arrest (CA) rates in geriatric surgical patients. **[ABSTRACT EDITED]**

57. Anesthetic and Obstetric Management of Syringomyelia During Labor and Delivery: A Case Series and Systematic Review.

Author(s): Garvey, Gráinne Patricia; Wasade, Vibhangini S; Murphy, Kellie E; Balki, Mrinalini

Source: Anesthesia and analgesia; Jun 2017

Publication Type(s): Journal Article

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

Abstract:BACKGROUNDSSyringomyelia is a rare, slowly progressive neurological condition characterized by the presence of a syrinx within the spinal cord. Consensus regarding the safest mode of delivery and anesthetic management in patients with syringomyelia remains

controversial and presents management dilemmas. This study reviews the cases of syringomyelia at our institution and provides a systematic review of the literature to guide decisions regarding labor and delivery management. **[ABSTRACT EDITED]**

58. Impact of Stroke Therapy Academic Industry Roundtable (STAIR) Guidelines on Peri-Anesthesia Care for Rat Models of Stroke: A Meta-Analysis Comparing the Years 2005 and 2015.

Author(s): Thomas, Aurelie; Detilleux, Johann; Flecknell, Paul; Sandersen, Charlotte

Source: PloS one; 2017; vol. 12 (no. 1); p. e0170243

Publication Type(s): Journal Article

Available in full text at [PLOS ONE](https://doi.org/10.1371/journal.pone.0170243) - from National Library of Medicine

Abstract: Numerous studies using rats in stroke models have failed to translate into successful clinical trials in humans. The Stroke Therapy Academic Industry Roundtable (STAIR) has produced guidelines on the rodent stroke model for preclinical trials in order to promote the successful translation of animal to human studies. These guidelines also underline the importance of anaesthetic and monitoring techniques. The aim of this literature review is to document whether anaesthesia protocols (i.e., choice of agents, mode of ventilation, physiological support and monitoring) have been amended since the publication of the STAIR guidelines in 2009. **[ABSTRACT EDITED]**

59. Change in children's oral health-related quality of life following dental treatment under general anaesthesia for the management of dental caries: a systematic review.

Author(s): Knapp, Rebecca; Gilchrist, Fiona; Rodd, Helen D; Marshman, Zoe

Source: International journal of paediatric dentistry; Jul 2017; vol. 27 (no. 4); p. 302-312

Publication Type(s): Journal Article Review

Abstract: BACKGROUND Dental caries has significant impact on children and their families and may necessitate treatment under general anaesthesia (GA). The use of oral health-related quality-of-life (OHRQoL) measures enables evaluation of dental treatment from a patient's perspective. OBJECTIVE This systematic review aimed to assess change in OHRQoL in children following treatment under GA for the management of dental caries. **[ABSTRACT EDITED]**

60. 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'anesthésie; Jun 2017; vol. 64 (no. 6); p. 597-607

Publication Type(s): Journal Article

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]

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July 2017; Volume 72, Issue 7

Anesthesia & Analgesia

July 2017; Volume 125, Issue 1

Anesthesiology

July 2017; Volume 127, Issue 1

British Journal of Anaesthesia

July 2017; Volume 119, Issue 1

Current Opinion in Anesthesiology

June 2017; Volume 30, Issue 3

Exercise: Relative Risk

The relative risk is the ratio of probability of an event (a specified outcome) occurring in one group (i.e. those exposed to a particular intervention) compared to those in another group (i.e. those not exposed – a control group).

The relative risk can be interpreted using the following chart. First, you must determine whether the event (the outcome measure) is adverse or beneficial.

Relative Risk	Adverse outcome (e.g. death)	Beneficial outcome (e.g. recovery of limb function)
<1	Intervention better than control	Intervention worse than control
1	Intervention no better or worse than control	Intervention no better or worse than control
>1	Intervention worse than control	Intervention better than control

Have a go at interpreting the relative risks for these three studies using the chart above. Is the intervention better or worse than the control?

	Intervention	Population	Outcome measure (think: adverse or beneficial?)	Relative Risk
Study 1	Drug X	Adults at risk of a heart attack	Heart attack	1.2
Study 2	Therapy programme Y	Smokers	Smoking cessation	0.8
Study 3	Probiotic Z	Children on antibiotics	Diarrhoea	0.3

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