Cette lettre regroupe la sélection (d'octobre 2016 à février 2017) des revues systématiques et méta-analyses Cochrane publiées dans le domaine de l'anesthésie. Elle comporte les titres, le contexte, les objectifs et les conclusions des revues.

Si un de vos collègues souhaite s'abonner à cette lettre d'information, il peut inscrire sur le site internet de

Cochrane France

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Giving intravenous nutrients to adults during surgery to prevent hypothermia

Contexte :

Inadvertent perioperative hypothermia (a drop in core temperature to below 36°C) occurs because normal temperature regulation is disrupted during surgery, mainly because of the effects of anaesthetic drugs and exposure of the skin for prolonged periods. Many different ways of maintaining body temperature have been proposed, one of which involves administration of intravenous nutrients during the perioperative period that may reduce heat loss by increasing metabolism, thereby increasing heat production.

Objectifs :

To assess the effectiveness of preoperative or intraoperative intravenous nutrients in preventing perioperative hypothermia and its complications during surgery in adults.

Conclusions des auteurs :

Intravenous amino acids may keep participants up to a half-degree C warmer than the control. This difference was statistically significant at the end of surgery, but not at other time points. However, the clinical importance of this finding remains unclear. It is also unclear whether amino acids have any effect on the risk of shivering and if intravenous nutrients confer any other benefits or harms, as high-quality data about these outcomes are lacking.

Référence de la revue :

Warttig S, Alderson P, Lewis SR, Smith AF. Intravenous nutrients for preventing inadvertent perioperative hypothermia in adults. Cochrane Database of Systematic Reviews 2016, Issue 11. Art. No.: CD009906. DOI: 10.1002/14651858.CD009906.pub2

Procalcitonin evaluation for reducing mortality in adults with sepsis

Contexte :

Serum procalcitonin (PCT) evaluation has been proposed for early diagnosis and accurate staging and to guide decisions regarding patients with sepsis, severe sepsis and septic shock, with possible reduction in mortality.

Objectifs :

To assess the effectiveness and safety of serum PCT evaluation for reducing mortality and duration of antimicrobial therapy in adults with sepsis, severe sepsis or septic shock.

Conclusions des auteurs :

Up-to-date evidence of very low to moderate quality, with insufficient sample power per outcome, does not clearly support the use of procalcitonin-guided antimicrobial therapy to minimize mortality, mechanical ventilation, clinical severity, reinfection or duration of antimicrobial therapy of patients with septic conditions.

Référence de la revue :

Andriolo BNG, Andriolo RB, Salomão R, Atallah ÁN. Effectiveness and safety of procalcitonin evaluation for reducing mortality in adults with sepsis, severe sepsis or septic shock. Cochrane Database of Systematic Reviews 2017, Issue 1. Art. No.: CD010959. DOI: 10.1002/14651858.CD010959.pub2

Videolaryngoscopes to guide the insertion of breathing tubes in adult surgical patients

Contexte :

Successful tracheal intubation during general anaesthesia traditionally requires a line of sight to the larynx attained by positioning the head and neck and using a laryngoscope to retract the tongue and soft tissues of the floor of the mouth. Difficulties with intubation commonly arise, and alternative laryngoscopes that use digital and/or fibreoptic technology have been designed to improve visibility when airway difficulty is predicted or encountered. Among these devices, a rigid videolaryngoscope (VLS) uses a blade to retract the soft tissues and transmits a lighted video image to a screen.

Objectifs :

Our primary objective was to assess whether use of videolaryngoscopy for tracheal intubation in adults requiring general anaesthesia reduces risks of complications and failure compared with direct laryngoscopy. Our secondary aim was to assess the benefits and risks of these devices in selected population groups, such as adults with obesity and those with a known or predicted difficult airway.

Conclusions des auteurs :

Videolaryngoscopes may reduce the number of failed intubations, particularly among patients presenting with a difficult airway. They improve the glottic view and may reduce laryngeal/airway trauma. Currently, no evidence indicates that use of a VLS reduces the number of intubation attempts or the incidence of hypoxia or respiratory complications, and no evidence indicates that use of a VLS affects time required for intubation.

Référence de la revue :

Lewis SR, Butler AR, Parker J, Cook TM, Smith AF. Videolaryngoscopy versus direct laryngoscopy for adult patients requiring tracheal intubation. Cochrane Database of Systematic Reviews 2016, Issue 11. Art. No.: CD011136. DOI: 10.1002/14651858.CD011136.pub2

Promoting cough in critically-ill adults and children to enable removal of the breathing tube (extubation) and breathing without the machine (weaning)

Contexte :

There are various reasons why weaning and extubation failure occur, but ineffective cough and secretion retention can play a significant role. Cough augmentation techniques, such as lung volume recruitment or manually- and mechanically-assisted cough, are used to prevent and manage respiratory complications associated with chronic conditions, particularly neuromuscular disease, and may improve short- and long-term outcomes for people with acute respiratory failure. However, the role of cough augmentation to facilitate extubation and prevent post-extubation respiratory failure is unclear.

Objectifs :

Our primary objective was to determine extubation success using cough augmentation techniques compared to no cough augmentation for critically-ill adults and children with acute respiratory failure admitted to a high-intensity care setting capable of managing mechanically-ventilated people (such as an intensive care unit, specialized weaning centre, respiratory intermediate care unit, or high-dependency unit).

Secondary objectives were to determine the effect of cough augmentation techniques on reintubation, weaning success, mechanical ventilation and weaning duration, length of stay (high-intensity care setting and hospital), pneumonia, tracheostomy placement and tracheostomy decannulation, and mortality (high-intensity care setting, hospital, and after hospital discharge). We evaluated harms associated with use of cough augmentation techniques when applied via an artificial airway (or non-invasive mask once extubated/decannulated), including haemodynamic compromise, arrhythmias, pneumothorax, haemoptysis, and mucus plugging requiring airway change and the type of person (such as those with neuromuscular disorders or weakness and spinal cord injury) for whom these techniques may be efficacious.

Conclusions des auteurs :

The overall quality of evidence on the efficacy of cough augmentation techniques for critically-ill people is very low. Cough augmentation techniques when used in mechanically-ventilated critically-ill people appear to result in few adverse events.

Référence de la revue :

Rose L, Adhikari NKJ, Leasa D, Fergusson DA, McKim D. Cough augmentation techniques for extubation or weaning critically ill patients from mechanical ventilation. Cochrane Database of Systematic Reviews 2017, Issue 1. Art. No.: CD011833. DOI: 10.1002/14651858.CD011833.pub2

Liposomal bupivacaine at the site of surgery to treat pain

Contexte :

Despite multi-modal analgesic techniques, acute postoperative pain remains an unmet health need, with up to three quarters of people undergoing surgery reporting significant pain. Liposomal bupivacaine is an analgesic consisting of bupivacaine hydrochloride encapsulated within multiple, non-concentric lipid bi-layers offering a novel method of sustained-release analgesia.

Objectifs :

To assess the analgesic efficacy and adverse effects of liposomal bupivacaine infiltration at the surgical site for the management of postoperative pain.

Conclusions des auteurs :

Liposomal bupivacaine at the surgical site does appear to reduce postoperative pain compared to placebo, however, at present the limited evidence does not demonstrate superiority to bupivacaine hydrochloride. There were no reported drug-related serious adverse events and no study withdrawals due to drug-related adverse events. Overall due to the low quality and volume of evidence our confidence in the effect estimate is limited and the true effect may be substantially different from our estimate.

Référence de la revue :

Hamilton TW, Athanassoglou V, Mellon S, Strickland LH, Trivella M, Murray D, Pandit HG. Liposomal bupivacaine infiltration at the surgical site for the management of postoperative pain. Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD011419. DOI: 10.1002/14651858.CD011419.pub2

Le paracétamol (acétaminophène), seul ou en combinaison avec la codéine ou la dihydrocodéine, contre la douleur neuropathique chez l'adulte

Contexte :

Le paracétamol, seul ou en combinaison avec de la codéine ou de la dihydrocodéine, est couramment utilisé pour traiter la douleur neuropathique chronique. Cette revue a recherché des preuves de l'efficacité et des effets délétères provenant d'études randomisées en double aveugle.

Objectifs :

Évaluer l'efficacité analgésique et les effets indésirables du paracétamol avec ou sans de la codéine ou de la dihydrocodéine pour la douleur neuropathique chronique chez l'adulte.

Conclusions des auteurs :

Il n'existe pas suffisamment de preuves pour soutenir ou réfuter la suggestion que le paracétamol seul, ou en association avec de la codéine ou de la dihydrocodéine, fonctionne contre n'importe quel type de douleur neuropathique.

Référence de la revue :

Wiffen PJ, Knaggs R, Derry S, Cole P, Phillips T, Moore R. Paracetamol (acetaminophen) with or without codeine or dihydrocodeine for neuropathic pain in adults. Cochrane Database of Systematic Reviews 2016, Issue 12. Art. No.: CD012227. DOI: 10.1002/14651858.CD012227.pub2

Aspirin (single dose) for relief of perineal pain after childbirth

Contexte :

Perineal trauma (due to spontaneous tears, surgical incision (episiotomy) or in association with operative vaginal birth) is common after vaginal birth, and is often associated with postpartum perineal pain. Birth over an intact perineum may also lead to perineal pain. There are adverse health consequences associated with perineal pain for the women and their babies in the short- and long-term, and the pain may interfere with newborn care and the establishment of breastfeeding. Aspirin has been used in the management of postpartum perineal pain and its effectiveness and safety should be assessed.

Objectifs :

To determine the efficacy of a single dose of aspirin (acetylsalicylic acid), including at different doses, in the relief of acute postpartum perineal pain.

Conclusions des auteurs :

We found low-quality evidence to suggest that single dose aspirin compared with placebo can increase pain relief in women with perineal pain post-episiotomy. Very low-quality evidence also suggested that aspirin can reduce the need for additional analgesia, without increasing maternal adverse effects. Evidence was downgraded based on study limitations (risk of bias), imprecision, and publication bias or both. RCTs excluded breastfeeding women so there is no evidence to assess the effects of aspirin on neonatal adverse effects or breastfeeding.

With international guidance recommending mothers initiate breastfeeding within one hour of birth, and exclusively breastfeed for the first six months, the evidence from this review is not applicable to current recommended best practice. Aspirin may be considered for use in non-breastfeeding women with post-episiotomy perineal pain. Although formal assessment was beyond the remit of this review, current guidance suggests that other analgesic drugs (including paracetamol) should be considered first for postpartum perineal pain. Such agents are the focus of other reviews in this series on drugs for perineal pain in the early postpartum period. It is considered most likely that if RCTs are conducted in the future they could compare aspirin with other pain relievers. Future RCTs should be designed to ensure high methodological quality, and address gaps in the evidence, such as the secondary outcomes established for this review. Current research has focused on women with post-episiotomy pain, future RCTs could be extended to women with perineal pain associated with spontaneous tears or operative birth.

Référence de la revue :

Molakatalla S, Shepherd E, Grivell RM. Aspirin (single dose) for perineal pain in the early postpartum period. Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD012129. DOI: 10.1002/14651858.CD012129.pub2

Topical anaesthesia for needle-related pain in newborn infants

Contexte :

Hospitalised newborn neonates frequently undergo painful invasive procedures that involve penetration of the skin and other tissues by a needle. One intervention that can be used prior to a needle insertion procedure is application of a topical local anaesthetic.

Objectifs :

To evaluate the efficacy and safety of topical anaesthetics such as amethocaine and EMLA in newborn term or preterm infants requiring an invasive procedure involving puncture of skin and other tissues with a needle.

Conclusions des auteurs :

Overall, all the trials were small, and the effects of uncertain clinical significance. The evidence regarding the effectiveness or safety of the interventions studied is inadequate to support clinical recommendations. There has been no evaluation regarding any long-term effects of topical anaesthetics in newborn infants.

High quality studies evaluating the efficacy and safety of topical anaesthetics such as amethocaine and EMLA for needle-related pain in newborn term or preterm infants are required. These studies should aim to determine efficacy of these topical anaesthetics and on homogenous groups of infants for gestational age. While there was no methaemoglobinaemia in the studies that reported methaemoglobin, the efficacy and safety of EMLA, especially in very preterm infants, and for repeated application, need to be further evaluated in future studies.

Référence de la revue :

Foster JP, Taylor C, Spence K. Topical anaesthesia for needle-related pain in newborn infants. Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD010331. DOI: 10.1002/14651858.CD010331.pub2

Cochrane France est le centre national de la collaboration Cochrane, organisation internationale, indépendante (ne recevant en particulier aucun financement de l'industrie pharmaceutique), à but non lucratif, dont l'objectif est de synthétiser les connaissances dans le domaine de la santé. Une de ces activités principales est la production de revues systématiques évaluant l'efficacité des interventions diagnostiques, thérapeutiques, préventives et organisationnelles dans le domaine de la santé. Ces revues sont accessibles dans la banque de données Cochrane.

Cochrane France est organisé sous la forme d'un Groupement d'intérêt scientifique (GIS) qui associe la Haute Autorité en Santé, l'INSERM et l'Assistance Publique – Hôpitaux de Paris. Il est financé par le Ministère des Affaires sociales et de la Santé. Cochrane France a mis en place un programme destiné à la traduction de l'ensemble des résumés des revues Cochrane. Ces traductions ont été rendues possibles grâce, outre à la contribution financière du **ministère français des affaires sociales et de la santé**, et à celle des organismes canadiens suivants (**Instituts de recherche en santé du Canada, ministère de la Santé et des Services Sociaux du Québec, Fonds de recherche du Québec-Santé et Institut national d'excellence en santé et en services sociaux**).