Tõendusmaterjali kokkuvõte - EvSu

Kliiniline küsimus nr 12

Kas postoperatiivses etapis on ägeda valu ravis tulemuslikum patsiendi poolt kontrollitud analgeesia vs õe poolt kontrollitud analgeesia?
Does PCA (patient controlled analgesia) give better pain relief comparing to NCA (nurse controlled analgesia) in postoperative period?

Kriitilised tulemusnäitajad:
valu tugevus, valu vähenemine, lisavaluvaigisti vajadus (sh opiaadi vajadus), aeg esimese lisavaluvaigisti vajaduseni, postoperatiivsete tüsistuste esinemissagedus, rehospitaliseerimine valu tõttu, patsiendi (eestkostja) rahulolu valuraviga, meetodi ohutus

Süstemaatilised ülevaated

Kokkuvõte süstemaatilistest ülevaadetest:
Kliinilise küsimuse vastus põhineb 1 süstemaatilisel ülevaatel, 4 ülevaateartiklil ja ühel randomiseeritud topeltpimedal platseebo- kontrollitud uuringul.
Patsiendi kontrollitud analgeesia (patient controlled analgesia- PCA) tähendab valuravi meetodit, mille käigus patsient ise manustab endale vajadusel väikseid doose valuvaigistit. Sageli on see termin seotud ka programmeeritavate pumpadega, mis manustavad (opioidseid) valuvaigisteid intravenoosselt.
Enamik uuringutest demonstreerib, et patsiendid eelistavad intravenoosset PCA-d traditsioonilistele meetoditele, kuna siis on neil olemas personaalne kontroll valu üle, nad saavad paremini reguleerida enda valuvaigisti manustamist ning ei pea muretsema selle üledoseeringu pärast. Samuti on oluline ajafaktor, mille jooksul patsient endale ravimit manustab, selle asemel, et oodata, millal õde selleks aega leiab.
*Näiteks **Dolin et al** enda ülevaateartikliga aastast 2002 leiavad, et nii visuaalanaloogskaala kui ka verbaalse reitingu alusel kurtsid patsiendid enam keskmist ja tõsist valu intramuskulaarse valuravi korral ja seda nii rahuolekus kui ka liigutamisel (IM 29.1%, PCA 10.4%, epiduraalanalgeesia 7.8%).*
Samas ülevaates selgus, et patsiendi rahulolu operatsioonijärgselt on enamasti hea, vaatamata mõõdukale või isegi tõsisele valusündroomile. Põhjus selleks on kompleksne: patsiendid eeldavad, et nad tunnevad valu operatsioonijärgselt ning valu tekkimise korral on nad tänulikud, kui meditsiinitöötajad nende valuga tegelevad, isegi kui meetmed alati edukad ei ole.
***Miaskowski** mainib, et intravenoossel PCA-l on mõistagi mõningaid piiranguid. Individuaalne PCA pumba programmeerimine on aja- ja ressursimahukas tegevus hõlmates endas teatud protsesse ja koostööd haigla erinevate struktuuride vahel- apteek (ravimilahuste töötlemine steriilsetes tingimustes) ja õenduspersonal (programmeerib ja vahetab pumba ning valuvaigisti manustamiseks vajalikud tarvikud, kontrollib pumba tööd).*
Suurem kulu ravimitele ja vajalikele tarvikutele muudab (intravenoosse) PCA mõnevõrra kallimaks ravimeetodiks võrreldes konventsionaalsete (intramuskulaarne manustamine) võtetega.
Programmeeritavate PCA pumpade kasutamine võimaldab individualiseerida patsiendi ravi, kuna ravimid doseeritakse arvestades patsiendi parameetreid nagu vanus ja eelnev opioidide kasutamine. Samuti on õel võimalik muuta pumba parameetreid vastavalt sellele, kuidas patsient ravile reageerib.
Loomulikult on selline käsitlus alati seotud võimalike vigadega ravimiannuste manustamises, mis võivad viia potentsiaalsete soovimatute tagajärgedeni nagu liigne sedatsioon, hingamise depressioon ja harvadel juhtudel ka letaalse lõppeni.

Viimatimainitud sündmused on siiski enamasti põhjustatud kõrges doosis ravimi püsiinfusioonist, vigadest programmeerimisel, intravenoosse kanüüli dislokatsioonist ja selle tagajärjel tekkinud ravimi (opioidi) subkutaansest depoost.

***Dolin et al** leidsid enda artiklis **"Tolerability of acute postoperative pain management: nausea, vomiting, sedation, pruritis, and urinary retention"**, et opioidiga PCA põhjustab enam **iiveldust (32%)**, kui epiduraalanalgeesia või intramuskulaarsed süsted (181 uuringugruppi, 23 782 patsienti, kellest 5773 said intramuskulaarset analgeesiat, 12 171 PCAd ja 5838 epiduraalanalgeesiat; keskmine iivelduse sagedus oli 25.2%).*

***Oksendamise** esinemissagedus oli kõikides gruppides sarnane, keskmiselt **20.2%** (153 uuringugruppi, 14 719 patsienti, kellest 6086 patsienti said intramuskulaarset analgeesiat, 5714 PCAd ja 2919 epiduraalanalgeesiat).*

***Kerget sedatsiooni** valuvaigistite manustamise korral esines keskmiselt **23.9%** (55 uuringugruppi, 9451 patsienti (352 intramuskulaarse analgeesia, 1822 PCA-ga ja 7277 epiduraalanalgeesiaga patsienti). PCA ja intramuskulaarne analgeesia olid seotud oluliselt kõrgema sedatsiooniohuga (53.7% ja 56.5% vastavalt) võrreldes epiduraalanalgeesiaga (14.3%).*

***Ülepiirilist sedatsiooni** esines **2.6%**-l (57 uuringugruppi, 15 522 patsienti (1528 intramuskulaarset analgeesiat, 3763 PCAd, 10 231 epiduraalanalgeesiat). PCA kasutajate hulgas esines ülepiirilist sedatsiooni 5.3%, intramuskulaarse analgeesia korral 5.2% ja epiduraalanalgeesia korral 1.2%.*

***Sügelust** esines **14.7%** patsientidest (196 uuringugruppi, milles 28 881 patsienti. 2161 patsienti intramuskulaarse analgeesiaga, 5259 patsienti PCA-ga ja 21 461 haiget epiduraalanalgeesiaga). Intramuskulaarne analgeesia on siinkohal seotud kõige väiksema esinemissagedusega (3.4%), PCA puhul 13.8% ja epiduraalanalgeesia korral 16.1%. Samas on varasemad uuringud näidanud, et intramuskulaarne analgeesia oli seotud ebaefektiivsema valuraviga, seega sügeluse madalam esinemissagedus võib olla seotud ka valuvaigistite ebaadekvaatse doseerimisega.*

***Uriiniretentsiooni** kohta oli teostatud 142 uuringut, keskmine esinemissagedus oli **23%**. Kokku uuriti 12 513 patsienti (2482 intramuskulaarse analgeesiaga, 2674 PCAga, 7357 patsienti epiduraalanalgeesiaga. Uriiniretentsiooni esines enam epiduraalanalgeesiaga patsientidel (29.1%).*

***Walder et al** (2001) leidsid enda süsteemses ülevaates PCA efektiivsusest ja ohutusest postoperatiivses perioodis, et opioidi- PCA on efektiivsem kui konventsionaalne opioid-analgeesia. Lisaks sellele leidsid nad kinnitust, et manustatud opioidi kogus on sarnane PCA ja konventsionaalses grupis ning opioidist sõltuvad kõrvaltoimed avalduvad samuti sarnaselt.*

Selgus ka, et patsiendid eelistavad PCA opioidi, kuigi ei ole sellepärast tingimata rohkem valuraviga rahul.

Üksikud uuringud näitasid, et peale PCA kasutamist väheneb postoperatiivsete pulmonaalsete komplikatsioonide sagedus.

***McNicol 2015:** Ülevaatesse on haaratud 49 RCT , 1725 pt PCA grupis ja 1687 pt kontrollgrupis.*

*PCA grupis oli **valu tugevus väiksem** enamusel ajahetkedel võrreldes kontrollgrupiga: nt . 24 tunnil oli valu tugevus 9 palli madalam (95% CI -13 kuni -5), 48 tunnil 10 palli madalam (95% CI -12 kuni -7).*

***Opiodi vajadus statistiliselt oluliselt suurem** 24 tunni jooksul PCA grupis (MD 7 mg, 95% CI 1-13) ja 48 tunni jooksul (MD 5 mg 95% CI 3 kuni 8).*

***Patsiendid olid rohkem rahul** PCA grupis (81% vs 61 % RD 0.20 95% CI 0.07 kuni 0.32).*

Haiglasoleku aeg** PCA grupis veidi lühem kuid see muutus on statistiliselt ebaoluline (MD -0.18, 95% CI **-0.63 kuni 0.26) .

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Commented [EH2]: Panin uuringu autori

Kõrvaltoimed: *PCA grupis esines* ***rohkem sügelust*** *(15 % vs 8% , p= 0.01), muude kõrvaltoimete suhtes vahet ei olnud gruppide vahel.*

Viited

Kokkuvõtte (abstract või kokkuvõtlikum info)	Viide kirjandusallikale
This review examines the evidence from published data concerning the incidence of moderate-severe and of severe pain after major surgery, with three analgesic techniques; intramuscular (i.m.) analgesia, patient controlled analgesia (PCA), and epidural analgesia. **Methods.** A MEDLINE search of the literature was conducted for publications concerned with the management of postoperative pain. Over 800 original papers and reviews were identified. Of these **212 papers** fulfilled the inclusion criteria but only 165 provided usable data on pain intensity and pain relief. Pooled data on pain scores obtained from these studies, which represent the experience of a total of nearly **20 000 patients**, form the basis of this review. **Results.** Different pain measurement tools provided comparable data. When considering a mixture of three analgesic techniques, the overall mean (95% Cl) incidence of moderate-severe pain and of severe pain was 29.7 (26.4-33.0)% and 10.9 (8.4-13.4)%, respectively. The overall mean (95% Cl) incidence of poor pain relief and of fair-to-poor pain relief was 3.5 (2.4-4.6)% and 19.4 (16.4-22.3)%, respectively. For i.m. analgesia the incidence of moderate-severe pain was 67.2 (58.1-76.2)% and that of severe pain was 29.1 (18.8-39.4)%. For PCA, the incidence of moderate-severe pain was 35.8 (31.4-40.2)% and that of severe pain was 10.4 (8.0-12.8)%. For epidural analgesia the incidence of moderate-severe pain was 20.9 (17.8-24.0)% and that of severe pain was 7.8 (6.1-9.5)%. The incidence of premature catheter dislodgement was 5.7 (4.0-7.4)%. Over the period 1973-1999 there has been a highly significant (P<0.000l) reduction in the incidence.of moderate-severe pain of 1.9 (1.1-2.7)% per year. **Conclusions.** **These results suggest that the UK Audit Commission (1997) proposed standards of care might be unachievable using current analgesic techniques. The data may be useful in setting standards of care for Acute Pain Services.**	**Effectiveness of acute postoperative pain management:** Evidence from published data S. J. Dolin, J. N. Cashman and J. M. Bland, 2002
The usefulness of intravenous patient-controlled analgesia (PCA) with opioids for postoperative analgesia is not well defined. **Methods** We systematically searched (MEDLINE, EMBASE, Cochrane Library, bibliographies, any language, to January 2000) for randomised trials comparing opioid-based PCA with the same opioid given intramuscularly, intravenously, or subcutaneously. Weighted mean differences (WMD) for continuous data, relative risks (RR) and numbers-needed-to-treat (NNT) for dichotomous data were calculated with 95% confidence intervals (CI) using fixed and random effects models. **Results**	**Efficacy and safety of patient-controlled opioid analgesia for acute postoperative pain** A quantitative systematic review B. WALDER, M. SCHAFER, I. HENZI and M. R. TRAME`R 2001

Data from **32 trials** were analysed: **22 (1139 patients)** were with morphine, five **(682)** with pethidine, three **(184)** with piritramide, one **(47)** with nalbuphine and one **(20)** with tramadol. In three morphine and one pethidine trial (352 patients), more patients preferred PCA (89.7% vs 65.8%, RR 1.41 (95%CI 1.11 to 1.80), NNT 4.2). Combined dichotomous data on pain intensity and relief, and the need for rescue analgesics from eight morphine, one pethidine, one piritramide, and one nalbuphine trial (691 patients), were in favour of PCA (RR 1.22 (1.00 to 1.50), NNT 8). In two morphine trials (152), pulmonary complications were more frequently prevented with PCA (100% vs 93.3%, RR 1.07 (1.01 to 1.14), NNT 15). There was equivalence for cumulative opioid consumption, pain scores, duration of hospital stay, and opioid-related adverse effects. **Conclusion: These trials provide some evidence that in the postoperative pain setting, PCA with opioids, compared with conventional opioid treatment, improve analgesia and decrease the risk of pulmonary complications, and that patients prefer them**.	
This review examines the evidence from published data concerning the tolerability (indicated by the incidence of nausea, vomiting, sedation, pruritis, and urinary retention), of three analgesic techniques after major surgery; intramuscular analgesia (i.m.), patient-controlled analgesia (PCA), and epidural analgesia. **Methods** A MEDLINE search of publications concerned with the management of postoperative pain and these indicators identified over **800** original papers and reviews. Of these, data were extracted from **183 studies** relating to postoperative nausea and vomiting, **89** relating to sedation, **166** relating to pruritis, and **94** relating to urinary retention, giving pooled data which represent a total of more than 100 000 patients. **Results** The overall mean (95% CI) incidence of nausea was 25.2 (19.3–32.1)% and of emesis was 20.2 (17.5–23.2)% for all three analgesic techniques. PCA was associated with the highest incidence of nausea but the emesis was unaffected by analgesic technique. There was considerable variability in the criteria used for defining sedation. The overall mean for mild sedation was 23.9 (23–24.8)% and for excessive sedation was 2.6 (2.3–2.8)% for all three analgesic techniques (significantly lower with epidural analgesia). The overall mean incidence of pruritus was 14.7 (11.9–18.1)% for all three analgesic techniques (lowest with i.m. analgesia). Urinary retention occurred in 23.0 (17.3–29.9)% of patients (highest with epidural analgesia). The incidence of nausea and excessive sedation decreased over the period 1980–99, but the incidence of vomiting, pruritis, and urinary retention did not. **Conclusions** **From these published data it is possible to set standards of care after major surgery for nausea 25%, vomiting 20%, minor sedation 24%, excessive sedation 2.6%, pruritis 14.7%, and urinary retention requiring catheterization 23%. Acute Pain Services should aim for incidences less than this standard of care.**	**Tolerability of acute postoperative pain management: nausea, vomiting, sedation, pruritis, and urinary retention.** Evidence from published data S. J. Dolin and J. N. Cashman 2001
This study examines the evidence from published data concerning the adverse respiratory and haemodynamic effects of three analgesic techniques after major surgery; i.m. analgesia, patient-controlled analgesia (PCA), and epidural analgesia. **Methods**. A MEDLINE search of the literature was conducted for publications concerned with the management of postoperative pain. Information relating to variables indicative of respiratory depression and of hypotension was extracted from these studies. Over **800** original papers and reviews were identified. Of these papers, **212** fulfilled the inclusion criteria but only **165** provided usable data on adverse effects. Pooled data obtained from these studies, which represent the experience of a total of nearly **20 000** patients, form the basis of this study. **Results**. There was considerable variability between studies in the criteria used for defining respiratory depression and hypotension. The overall mean (95% CI) incidence of respiratory depression of the three analgesic techniques was: 0.3 (0.1–1.3)% using requirement for naloxone as an indicator; 1.1 (0.7–1.7)% using hypoventilation as an indicator; 3.3 (1.4–	**Respiratory and haemodynamic effects of acute postoperative pain management: evidence from published data** J. N. Cashman and S. J. Dolin 2004

7.6)% using hypercarbia as an indicator; and 17.0 (10.2–26.9)% using oxygen desaturation as an indicator. For i.m. analgesia, the mean (95% CI) reported incidence of respiratory depression varied between 0.8 (0.2–2.5) and 37.0 (22.6–45.9)% using hypoventilation and oxygen desaturation, respectively, as indicators. For PCA, the mean (95% CI) reported incidence of respiratory depression varied between 1.2 (0.7–1.9) and 11.5 (5.6–22.0)%, using hypoventilation and oxygen desaturation, respectively, as indicators. For epidural analgesia, the mean (95% CI) reported incidence of respiratory depression varied between 1.1 (0.6–1.9) and 15.1 (5.6–34.8)%, using hypoventilation and oxygen desaturation, respectively, as indicators. The mean (95% CI) reported incidence of hypotension for i.m. analgesia was 3.8 (1.9–7.5)%, forPCA 0.4 (0.1–1.9)%, and for epidural analgesia 5.6 (3.0–10.2)%. Whereas the incidence of respiratory depression decreased over the period 1980–99, the incidence of hypotension did not. **Conclusions. Assuming a mixture of analgesic techniques, Acute Pain Services should expect an incidence of respiratory depression, as defined by a low ventilatory frequency, of less than 1%, and an incidence of hypotension related to analgesic technique of less than 5%.**	
A bicenter randomized, patients, healthcare providers, and data collectors blind placebo-controlled trial in multimodal analgesia for postoperative lumbar spine surgery was conducted. **Objective.** To assess the efficacy and safety of parecoxib on postoperative pain management after posterior lumbar spine surgery. Systematic reviews suggest that cyclo-oxygenase-2 inhibitors are an effective treatment for acute postoperative pain. However, previous trials on lumbar spine surgery showed equivocal efficacy of cyclo-oxygenase-2 inhibitors for postoperative pain relief. **Methods**. In this study, **120** patients undergoing posterior lumbar discectomy, spinal decompression, or spinal fusion were stratified based on the surgical procedure to 3 groups (n _ 40) and randomly allocated to receive multidoses of parecoxib 40 mg/dose or placebo. Efficacy was assessed by total morphine used from patient-controlled analgesic pump, pain intensity, pain relief, and the patient's subjective rating of the medication. **Results**. Parecoxib 40 mg reduced the total amount of morphine required over 48 hours by 39% relative morphine reduction compared with placebo (P _ 0.0001). Pain at rest was reduced by 30% (P _ 0.0001). Ninety percent of patients given parecoxib experienced at least 50% maximum total pain relief compared with 58% treated with placebo. The number-needed-to-treat for 1 patient to have at least half pain relief was 3.1 (2.0–4.6). Patients' subjective rating of the medication was described as "excellent, good, and fair" by 48%, 43%, and 8% in the parecoxib group, respectively, compared with 21%, 50%, and 28% of placebo patients (P _ 0.004). Overall adverse effectsnof patients receiving parecoxib and morphine were comparable to those receiving morphine alone. **Conclusion. The present study demonstrates that the perioperative administration of parecoxib with patient controlled analgesic morphine after lumber spine surgery resulted in significantly improved postoperative analgesic management as defined by reduction in opioid requirement, lower pain scores, and higher patients' subjective rating of the medication.**	**Effect of Parecoxib on Postoperative Pain After Lumbar Spine Surgery** A Bicenter, Randomized, Double-Blinded, Placebo-Controlled Trial Kitti Jirarattanaphochai, MD,* Somboon Thienthong, MD,† Wimonrat Sriraj, MD, MS,† Surachai Jung, MD,* Aksorn Pulnitiporn, MD,‡ Somkid Lertsinudom, MD,§ and Thanit Foocharoen, MD§ 2008
Although numerous clinical practice guidelines for pain management have been published throughout the last 12 years, inadequate pain relief remains a significant health care issue. Several patient controlled analgesia (PCA) modalities are currently available for the treatment of acute postoperative pain, including intravenous (IV) PCA, epidural (PCEA), and oral PCA. Although PCEA and IV PCA are both commonly used modalities, IV PCA is considered the standard of care for postoperative pain management. Limitations of this modality do exist, however. Consequently, noninvasive PCA systems are under development to circumvent many of these limitations, including the fentanyl hydrochloride patient-controlled transdermal system (PCTS); (IONSYS™ Ortho-McNeil Pharmaceutical, Raritan, NJ) and a number of patient-controlled intranasal analgesia (PCINA) delivery systems. The objective of this article is to review the PCA modalities currently in use and to discuss those in development for the treatment of acute postoperative pain.	**Patient-controlled Modalities for Acute Postoperative Pain Management** Christine Miaskowski, RN, PhD, FAAN 2005

Conclusion IV PCA is an effective modality for the treatment of acute postoperative pain and is currently considered the standard of care by which emerging analgesic modalities are measured; however, a number of drawbacks are associated with its use. IV PCA administration requires considerable staff time to program and maintain pumps and monitor patients. Patient tampering with IV PCA systems has resulted in overseda tion, and patient deaths have been attributed to errors in pump programming. IV PCA systems may also limit patient mobility. The fentanyl HCl PCTS and PCINA are two noninvasive PCA modalities currently under development. Several clinical trials have shown PCINA to be as effective as IV PCA in managing postoperative pain. However, additional studies are needed to determine the optimal formulation of fentanyl to minimize the nasal irritation and bitter aftertaste reported with IN administration. The fentanyl HCl PCTS addresses some of the limitations of currently available IV PCA systems and appears to be a promising noninvasive PCA modality. The system has proven to be safe and effective in the management of moderate-to-severe acute postoperative pain. It provides the benefits of PCA, such as patient control over pain and consistent pain management, without analgesic peaks and troughs. The fentanyl HCl PCTS design has the potential to improve the management of acute postoperative pain by providing patients with a convenient and noninvasive alternative to IV PCA that does not have the associated risks of medication errors. Regulatory approval for the fentanyl HCl PCTS is currently being sought in both the United States through the Food and Drug Administration (FDA) and in Europe through the European Medicines Agency (EMEA).	

Background This is an updated version of the original Cochrane review published in Issue 4, 2006. Patients may control postoperative pain by self administration of intravenous opioids using devices designed for this purpose (patient controlled analgesia or PCA). A 1992 meta- analysis by Ballantyne et al found a strong patient preference for PCA over non-patient controlled analgesia, but disclosed no differences in analgesic consumption or length of postoperative hospital stay. Although Ballantyne's meta-analysis found that PCA did have a small but statistically significant benefit upon pain intensity, a 2001 review by Walder et al did not find statistically significant differences in pain intensity or pain relief between PCA and groups treated with non-patient controlled analgesia. **Objectives** To evaluate the efficacy and safety of patient controlled intravenous opioid analgesia (termed PCA in this review) versus non-patient controlled opioid analgesia of as-needed opioid analgesia for postoperative pain relief. **Search methods** We ran the search for the previous review in November 2004. For this update, we searched the Cochrane Central Register of Controlled Trials (CENTRAL 2014, Issue 12), MEDLINE (1966 to 28 January 2015), and EMBASE (1980 to 28 January 2015) for randomized controlled trials (RCTs) in any language, and reference lists of reviews and retrieved articles. **Selection criteria** We selected RCTs that assessed pain intensity as a primary or secondary outcome. These studies compared PCA without a continuous background infusion with non-patient controlled opioid analgesic regimens. We excluded studies that explicitly stated they involved patients with chronic pain. **Data collection and analysis** Two review authors independently extracted data, which included demographic variables, type of surgery, interventions, efficacy, and adverse events. We graded each included study for methodological quality by assessing risk of bias and employed the GRADE approach	**Patient controlled opioid analgesia versus non-patient controlled opioid analgesia for postoperative pain (Review)** McNicol ED, Ferguson MC, Hudcova J *The Cochrane Library 2015, Issue 6*

to assess the overall quality of the evidence. We performed meta-analysis of outcomes that included pain intensity assessed by a 0 to 100 visual analog scale (VAS), opioid consumption, patient satisfaction, length of stay, and adverse events. **Main results** Forty-nine studies with 1725 participants receiving PCA and 1687 participants assigned to a control group met the inclusion criteria. The original review included 55 studies with 2023 patients receiving PCA and 1838 patients assigned to a control group. There were fewer included studies in our updated review due to the revised exclusion criteria. For the primary outcome, participants receiving PCA had lower VAS pain intensity scores versus non-patient controlled analgesia over most time intervals, e.g., scores over 0 to 24 hours were nine points lower (95% confidence interval (CI) -13 to -5, moderate quality evidence) and over 0 to 48 hours were 10 points lower (95% CI -12 to -7, low quality evidence). Among the secondary outcomes, participants were more satisfied with PCA (81% versus 61%, P value = 0.002) and consumedhigher amounts of opioids than controls (0 to 24 hours, 7 mg more of intravenous morphine equivalents, 95% CI 1 mg to 13 mg). Those receiving PCA had a higher incidence of pruritus (15% versus 8%, P value = 0.01) but had a similar incidence of other adverse events. There was no difference in the length of hospital stay. **Authors' conclusions** Since the last version of this review, we have found new studies providing additional information. We reanalyzed the data but the results did not substantially alter any of our previously published conclusions. This review provides moderate to low quality evidence that PCA is an efficacious alternative to non-patient controlled systemic analgesia for postoperative pain control.	

Ravijuhendid

Kokkuvõte ravijuhendites leiduvast:

AU-10 Acutepain AU (Austraalia ja Uus- Meremaa ägeda postoperatiivse valu ravijuhend):

Intravenoosselt opioidi manustav PCA tagab parema analgeesia kui konventsionaalsed (intramuskulaarne, subkutaanne) opioidi manustamise meetodid, kuid reeglina on tarbitava opioidi kogus suurem ning puudub erinevus hospitaliseerimise kestvuses või opioidiga seotud kõrvaltoimete tekkes (v.a. sügelus ja patsiendi rahulolu, mis mõlemad on PCA puhul tõusnud). Viimane väide on mõnevõrra erinev vanematest meta-analüüsidest, mis kinnitasid, et opioidi tarbimises ning kõrvaltoimete tekkes ei olnud mingit erinevust.

Olukordades, kus on kõrge õde:patsient suhe ja kus on võimalik manustada valuvaigistit tõesti vajadusel, võivad konventsionaalsed opioidi manustamise meetodid olla sama efektiivsed kui intravenoosne opioid- PCA.

Patsiendi kontrollitud analgesia vs õe kontrollitud analgeesia võrdlusel peale kardiokirurgilisi protseduure selgus, et puudus erinevus analgeesia efektiivsuses esimese 24 postoperatiivse tunni jooksul (periood, mil õenduspersonali tähelepanu on kõrgem), kuid PCA andis selgelt parema analgeesia 48 tunni möödudes operatsioonist.

Erakorralise meditsiini osakonnas oli intravenoosne PCA sama efektiivne kui õe poolt manustatud intravenoossed opioidiboolused.

Väga suured erinevused PCA parameetrites (boolusdoosid, lukustusintervallid ja maksimaalsed lubatud kumulatiivsed doosid), mida uuringutes on kasutatud, viitab sellele, et ideaalset mudelit ei ole olemas ning see omakorda võib limiteerida meetodi paindlikkust

ja efektiivsust. Kui soovida maksimaalset tulemust (s.t. patsiendi maksimaalset heaolu), siis tuleks ordineerida igale haigele individuaalne PCA-pump.

Euroopa Uroloogide Assotsiatsiooni valuravijuhend soovitab samuti PCA kasutamist, kuna see annab parema postoperatiivse analgeesia, parandab patsiendi rahulolu ja vähendab riski hingamissüsteemi komplikatsioonide tekkeks.

Otsingusõnad

12. Kas postoperatiivses etapis on (lastel) ägeda valu ravis tulemuslikum patsiendi poolt kontrollitud analgeesia vs õe poolt kontrollitud analgeesia?
Does PCA (patient controlled analgesia) give better pain relief comparing to NCA (nurse controlled analgesia) in postoperative period (in paediatric patients)?

Acute postoperative pain
and
(p(a)ediatric patients)
and
PCA (patient controlled analgesia)
Or
NCA (nurse controlled analgesia)