

Kliiniline küsimus nr 14

Kas postoperatiivselt koduse kirjaliku valuravijuhise kasutamine vs mittekasutamine mõjutab ägeda valu ravi tulemust?

Tulemusnäitajad: valu tugevus, postoperatiivsete tüsistuste esinemissagedus, rehospitalseerimine valu tõttu, patsiendi (eestkostja) rahulolu valuraviga

Ravijuhendid

Kokkuvõte:

Postoperatiivselt **koduse** kirjaliku valuravijuhise kasutamist ei ole ravijuhendites AU10 ja DE-07 käsitletud. Küll aga rõhutavad mõlemad juhendid: selleks, et patsient saaks postoperatiivse valuga hakkama, tuleks patsiendi õpetusega alustada juba preoperatiivses perioodis. Mõlemas juhendis rõhutatakse, et lisaks verbaalsele informatsioonile jagamisele tuleb patsiendi õpetamiseks kasutada ka teisi patsiendile sobivaid meetodeid, sh kirjalike juhiste kasutamine.

1. Acute Pain Management: Scientific Evidence 2010 (AU10)

Key messages:

Written information given to patients prior to seeing an anaesthetist is better than verbal information given at the time of the interview (Level III)

2.“Behandlung acuter perioperativer und postraumatischer Schmerzen” 2009 (DE-07)

All patients should receive preoperatively information about the postoperative pain management. (GoR: A)

It is advisable to give to patient personal information in addition to the other forms of information (brochures, film) about the postoperative pain management.
Before discharge from the hospital, also written information should be provided about the further healing process and instructions.

Patient must have information about perioperative pain management plan. (GoR: A)
The timing of the preoperative patient education must be adequate. (GoR: A)

Süsteematilised ülevaated

Kokkuvõte

Otsingu tulemusena ei leitud ühtegi meta-analüüsi, mis annaks vastuse kliinilisele küsimusele kas postoperatiivselt koduse kirjaliku valuravijuhise kasutamine vs mittekasutamine mõjutab ägeda valuravi tulemust. Leiti kaks süstemaatilist ülevaadet, millest selgub, et patsiendid kellele on preoperatiivselt jagatud lisaks verbaalsele informatsioonile antud ka kirjalik materjal, tõstab patsiendi teadlikkust valust, ning nad võiksid saada postoperatiivse valuga paremini hakkama.

1. Louw A. (2013). "Preoperative education addressing postoperative pain in total joint arthroplasty: review of content and educational delivery methods." *Physiotherapy Theory and Practice*, Apr;29(3):175-94.

OBJECTIVE: Evaluate content and educational delivery methods of preoperative education in total joint arthroplasties of the hip and knee (THA and TKA) addressing postoperative pain.

DATA SOURCES: Systematic searches conducted on Biomed Central, BMJ.com, CINAHL, the Cochrane Library, NLM Central Gateway, OVID, ProQuest (Digital Dissertations), PsycInfo, PubMed/Medline, ScienceDirect, and Web of Science. Secondary searching (pearling) was undertaken.

DATA EXTRACTION: Data were extracted utilizing the participants, interventions, comparisons, and outcomes approach.

STUDY SELECTION: All randomized controlled trials (RCTs) evaluating the effect of preoperative education on postoperative pain in THA and TKA surgery were considered for inclusion.

LIMITATIONS: Studies published in English; published within the last 20 years and patients over the age of 18. No limitations were set on specific outcome measures of pain.

DATA SYNTHESIS: This review included 13 RCTs involving a total of 1,017 subjects who underwent THA or TKA. Educational delivery methods comprised verbal one-on-one or group education sessions, delivered within 4 weeks of surgery lasting an average of 30 minutes, and accompanied by other written materials. The educational content centered on descriptions of preoperative preparation, hospital stay, surgical procedure, immediate/intermediate experiences, expectations following surgery, rehabilitation, encouragement/reassurance, and answering common question associated with the surgical experience.

CONCLUSIONS: Preoperative education centered on a biomedical model of anatomy and pathoanatomy as well as procedural information has limited effect in reducing postoperative pain after THA and TKA surgeries. Preoperative educational sessions that aim to increase patient knowledge of pain science may be more effective in managing postoperative pain.

2. Ronco, M. et al (2011). „Patient education outcomes in surgery: a systematic review from 2004 to 2010“ *Int J Evid Based Healthc*; 10: 309–323

Rationale and objectives The aim of this study was to describe preoperative educational interventions (including content and delivery time) and postoperative outcomes as considered in studies evaluating the effectiveness for patients undergoing major surgery published from 2004 to 2010.

Methods A systematic review of preoperative education and its effects on postoperative patient outcomes was undertaken. A search was conducted of the PubMed, CINAHL and EBMR databases, including the Cochrane Central Register of Controlled Trials. Randomised controlled trials, or at least clinical trials including pre-/post-test evaluations, with educational interventions performed by nurses preoperatively and outcomes evaluated postoperatively, and written in English, were included.

Results A total of 19 studies involving 3944 patients were retrieved. Of these, 12 were RCTs. Interventions were based on verbal education, on written/visual education, or both. The content of interventions varied widely. Frequent outcomes evaluated were anxiety, knowledge, pain and length of stay. Objective knowledge (what a patient retains from education) was the only positive outcome influenced by education.

Conclusions Current trends in preoperative education are: scheduling education early; increased frequency of message exposure through several interventions and/or reinforcements; content frequently addressing postoperative management; the measurement of outcomes such as patients' cognitive, experiential and biophysiological aspects.

RCT-d

Kokkuvõte

Ei leitud ühtegi randomiseeritud kliinilist uuringut, kust leiduks vastus antud kliinilisele küsimusele. Leidsid 4 randomiseeritud uuringut, kus uuriti preoperatiivselt antud informatsiooni mõju postoperatiivse valu tulemusnäitajatele. Leiti nii seda, et kodune kirjalik õpetus võiks vähendada valu tugevust ja kasutatud valuvaigistite koguseid, kui ka seda, et interventsioon ei mõjutanud koduse valuravi kvaliteeti.

1. Kol et al. "Preoperative Education and Use of Analgesic Before Onset of Pain Routinely for Post-thoracotomy Pain Control Can Reduce Pain Effect and Total Amount of Analgesics Administered Postoperatively." *Pain Management Nursing* 15.1 (2014): 331-339.

AIM: to investigate the efficiency of preoperative pain management education and the role of analgesics administration before the onset of pain postoperatively.

Method: The study was a prospective, randomized, and single-blind clinical trial, which was conducted January 1, 2008 through October 1, 2008 in the Thoracic Surgery Unit of Akdeniz University Hospital. A total of 70 patients who underwent thoracotomy (35 in the control group and 35 in the study group) were included in the study. Of the patients, 70% (n = 49) were male and 30% (n = 21) were female. Mean age was 51 ± 10 years (range = 25-65). The same analgesia method was used for all patients; the same surgical team performed each operation. Methods, including preemptive analgesia and placement of pleural or thoracic catheter for using analgesics, that were likely to affect pain level, were not used. The same analgesia medication was used for both patient groups. But the study group, additionally, was educated on how to deal with pain preoperatively and on the pharmacological methods to be used after surgery. An intramuscular diclofenac Na 75 mg was administered to the study group regardless of whether or not they reported pain in the first two postoperative hours. The control group did not receive preoperative education, and analgesics were not administered to them unless they reported pain in the postoperative period. The routine analgesics protocol was as follows: diclofenac Na 75 mg (once a day) intramuscular administered upon the complaint of pain following extubation in the postoperative period and 20 mg mepederin intravenously (maximum dose, 100 mg/day), in addition, when the patient expressed pain. Pain severity was assessed during the second, fourth, eighth, 16th, 24th, and 48th hours, and marked using the Verbal Category Scale and the Behavioral Pain Assessment Scale. Additionally, the total dose of daily analgesics was calculated.

Results: The demographic characteristics showed a homogeneous distribution in both patient groups. The rate of pain, which was defined as sharp, stabbing, and exhausting, was higher in the control group than in the study group, and the difference between the two groups was statistically significant ($p < .05$). As the doses of analgesics used for pain management in both groups were compared, it was determined that [analgesic consumption was lower in the study group](#) than in the control group, and the difference was statistically significant ($p < .05$). As a result, it was determined that [preoperative thoracic pain management education and analgesics administered postoperatively, before the onset of pain, reduced the amount of analgesics used in the first postoperative 48 hours](#).

2. Makki, Daoud, et al. "The efficacy of patient information sheets in wrist arthroscopy: a randomised controlled trial." *Journal of Orthopaedic Surgery* 19.1 (2011).

Purpose. To [evaluate the effects of perioperative information](#) for wrist arthroscopy on postoperative pain, return to daily activities, and patient satisfaction.

Methods. 34 women and 21 men aged 19 to 54 (mean, 35) years underwent diagnostic wrist arthroscopy to explore the radiocarpal and midcarpal joints. They were [randomised](#) to receive specific preoperative information on the procedure (pictures of the wrist joint anatomy, portal entry sites, and the arthroscope) and written instructions on postoperative care ($n=28$) or only standard preoperative information and verbal instructions on postoperative care ($n=27$). The visual analogue score (VAS) for pain and the Quick Dash score for return to daily activities of each patient were recorded before and after wrist arthroscopy. Analgesic intake after wrist arthroscopy was recorded.

Results. The [mean post-arthroscopic VAS from days 2 to 6 was significantly lower in the experimental group than controls](#). This was reflected by the [decrease in analgesic intake](#). The mean post-arthroscopic Quick Dash score was significantly lower in the experimental group than controls (40 vs. 47, $p=0.02$), indicating earlier return to daily activities.

Conclusion. [Patients who received specific preoperative information on the procedure and written instructions on postoperative care experienced less pain, consumed less analgesics, and had an earlier return to daily activities.](#)

3. Franck et al. "Parent involvement in pain management for NICU infants: a randomized controlled trial." *Pediatrics* (2011): peds-2011.

Objectives: To demonstrate feasibility and estimate the effect of an intervention to increase parental involvement in infant pain management in the NICU on parents' stress and postdischarge parenting competence and confidence.

Methods: The study involved a [randomized controlled trial](#). Parents recruited from 4 NICUs were randomly assigned by site to receive (1) a [pain information booklet](#) and instruction on infant comforting techniques ($n = 84$ intervention) in addition to a generic NICU care booklet or (2) the [generic NICU care booklet alone](#) ($n = 85$ control). The primary outcome was postintervention Parent Stressor Scale: NICU (PSS:NICU) scores. Secondary outcomes included parent attitudes about infant pain, nursing pain assessment, and parenting competence and role attainment after discharge.

Results: No differences were found between groups in PSS:NICU scores. Significant differences favoring the intervention group were found for satisfaction with pain information, parents shown infant pain cues and comforting techniques, nursing pain assessment, and parent preference for involvement during painful procedures. Role attainment after discharge was higher for the intervention group than for the control group. Both the intervention and control groups highly valued attention to infant pain and wanted information and involvement.

Conclusions: These results provide no evidence of a reduction in NICU-related stress for parents who receive an intervention to increase their understanding and involvement in infant pain management. However, parents in the intervention group were better prepared to take an active role in infant pain care and had more positive views about their role attainment in the postdischarge period.

4. Watt-Watson, Judy, et al. "Impact of preoperative education on pain outcomes after coronary artery bypass graft surgery." *Pain* 109.1 (2004): 73-85.

Aim: to evaluate a preadmission education intervention to reduce pain and related activity interference after CABG surgery.

Methods: Patients ($N=406$) were randomly assigned to (a) standard care or (b) standard care + pain booklet group. Data were examined at the preadmission clinic and across days 1–5 after surgery. Outcomes were pain-related interference (BPI-I), pain (MPQ-SF), analgesics (chart), concerns about taking analgesics (BQ-SF), and satisfaction (American Pain Society-POQ). The impact of sex was explored related to primary and secondary outcomes.

Results: The intervention group did not have better overall pain management although they had some reduction in pain-related interference in activities ($t(355)=2.54$, $P<0.01$) and fewer concerns about taking analgesics ($F(1,313)=2.7$, $P<0.05$) on day 5. Despite moderate 24-h pain intensity across 5 days, patients in both groups received inadequate analgesics (i.e. 33% prescribed dose). The booklet was rated as helpful, particularly by women.

Conclusion: the intervention did not result in a clinically significant improvement in pain management outcomes.

Muud uuringud

Kokkuvõte

Uuringutes on saadud erinevaid tulemusi:

1. Postoperatiivse valu tugevust ei mõjuta see, kas informatsiooni antakse verbaalselt või mitte (Matijević 2013)
2. Kirjalik informatsioon ei ole piisav, et mõjutada vanemate antavat kodust valuravi lastele (Vincent 2012)
3. Enne operatsiooni antud kirjalik info annab patsientidele hea teadmise, mida oodata postoperatiivselt perioodilt (O'Brien 2013)
4. Haiglast väljakirjutamisel antav kirjalik info aitab osadel patsientidel paremini antud informatsiooni meelde tuletada (Samuels-Kalow 2012)

5. Enne operatsiooni antud info parandas saadud info kvaliteeti, kergendas vestlust anestezioloogiga ja patsiendi nõusolekut postoperatiivse valuravi programmiga. (Binhas 2008)

1. O'Brien et al. "Pre-surgery education for elective cardiac surgery patients: A survey from the patient's perspective." *Australian occupational therapy journal* 60.6 (2013): 404-409.

BACKGROUND/AIM: Multidisciplinary pre-admission patient education is commonly recommended for elective surgery patients, and may involve the provision of written information and presentations from the health team. However, the occupational therapy role with elective sternotomy patients in our setting is confined to the post-operative period. We aimed to evaluate cardiac surgery patients' perception of the effectiveness and timing of pre-admission multidisciplinary written information and post-operative verbal education provided by occupational therapy.

METHODS: This cross-sectional study involved a written survey, which was posted to 375 people who had undergone cardiac surgery in 2009-2010. Questions were designed to elicit patient perceptions of both pre-operative written information and post-operative education relating to post-operative precautions and return to activity received from occupational therapy.

RESULTS: There were 118 surveys returned equalling a 31.4% response rate. Eighty-nine per cent of respondents recalled receiving and reading the pre-surgery information booklet, and this was significantly correlated with feeling prepared for the post-operative experience and adherence with precautions ($P < 0.0001$). Exactly 30.4% of respondents stated that they experienced stress and anxiety in relation to post-operative expectations, and 47.3% felt the information provided in the occupational therapy education sessions would have been more beneficial for their understanding and coping if provided prior to surgery.

CONCLUSIONS: Multidisciplinary written pre-surgery education appears to be providing patients with a good understanding of what to expect following surgery. The results suggest that pre-operative verbal education from occupational therapy would assist in reducing anxiety in a subgroup of patients.

2. Matijević, Marko, et al. "The Influence of Surgical Experience, Type of Instructions Given to Patients and Patient Sexes on Postoperative Pain Intensity Following Lower Wisdom Tooth Surgery." *Acta clinica Croatica* 52.1. (2013): 23-28

Aim of this study: to determine the extent to which the intensity of postoperative pain in the first seven days after lower wisdom tooth extraction is affected by operator experience, patient level of information and patient sex.

Methods: Postoperative pain intensity after lower wisdom tooth extraction was assessed in 108 patients. Depending on the type of information given to each patient individually, the patients were divided into two groups: test group in which patients were provided with detailed standard written and verbal instructions and control group where patients only received detailed standard written instructions about treatment after surgery. Each of these two groups was divided into three subgroups depending on operator experience.

Results: the type of information irrespective of being given verbally or not had no effects on postoperative pain intensity, whereas operator experience and patient sex influenced postoperative pain intensity.

3. Sayin, Yazile, and Guler Aksoy. "The effect of analgesic education on pain in patients undergoing breast surgery: within 24 hours after the operation." *Journal of clinical nursing* 21.9-10 (2012): 1244-1253.

Aim. The goal of this study was to assess the effect of patient information about the analgesics used after breast surgery, on patient's level of pain and mobilisation ability.

Background. Pain needs to be managed efficiently; in particular, for surgical cases, postoperative pain must be effectively controlled. Information about analgesic helped reduce the severity of pain.

Design. This study was a clinical trial comparing a test group that received information about the analgesic to be used and a control group that received information as usual.

Methods. Eighty-four patients who had a modified radical mastectomy or breast-conserving surgery were included in the study. Data were collected in a breast surgery clinic with a questionnaire, with the use of Short-form McGill-Melzack Pain Questionnaire and the Visual Analogue Scale. The test group received information about the surgical pain and the analgesics that would be used during the postoperative period.

Results. The results showed that the level of pain reported by patients was similar in the test and control groups. However, the average level of postoperative pain in the test group was lower than that in the control group. The total pain reduction score for the test group, after surgery, was greater than for the control group. Following surgery, 73.8% of the test group and 50.0% of the control group achieved mobilisation within the first six hours.

Conclusion. Informing patients about the analgesics to be used for their care reduced pain and provided earlier mobilisation.

Relevance to clinical practice. The findings of this study can provide guidance to nurses and improve analgesic control of pain management.

4. Samuels-Kalow, Margaret E., Anne M. Stack, and Stephen C. Porter. "Effective discharge communication in the emergency department." *Annals of emergency medicine* 60.2 (2012): 152-159.

Communication at discharge is an important part of high-quality emergency department (ED) care. This review describes the existing literature on patient understanding and implementation of discharge instructions, discusses previous interventions aimed at improving the discharge process, and recommends best practices and future research.

Methods: MEDLINE and Cochrane databases were searched, using combinations of key terms. Literature from both the adult and pediatric ED populations was reviewed.

Results: Multiple reports have shown deficient comprehension at discharge, with patients or parents frequently unable to report their diagnosis, management plan, or reasons to return. Interventions to improve discharge communication have been, at best, moderately successful. Patients need structured content, presented verbally, with written and visual cues to enhance recall.

Written materials provided at discharge have been associated with improved recall of information in most but not all reports.

Written instructions need to be provided in the patient's language and at an appropriate reading level. Understanding should be confirmed before the patient leaves the ED. Further research is needed to describe the optimal content, channel, and timing for the ED discharge process and the relationship between discharge process and outcomes.

5. Vincent, C., et al. (2012). **“Parents’ management of children’s pain at home after surgery”** Journal for Specialists in Pediatric Nursing 17:108–120

Purpose. We tested home pain management for children for effects on pain intensity, analgesics administered, satisfaction, and use of healthcare services over 3 post-discharge days.

Design and Methods. In this quasi-experimental study with 108 children and their parents, we used the numeric rating scale or the Faces Pain Scale-Revised, calculated percentages of analgesics administered, and asked questions about expectations, satisfaction, and services. Between-group differences were tested with *t*-tests and analysis of variance.

Results: After home pain management for children, children reported moderate pain, and parents administered more analgesics on study days. Parents and children were satisfied; parents used few services. Written instructions and a brief interactive session were not sufficient to change parents’ analgesic administration practices to relieve their children’s pain.

Practice Implications. Further research is needed to develop and test effective education interventions to facilitate relief of children’s postoperative pain.

6. Binhas, M., et al. (2008). **„Impact of written information describing postoperative pain management on patient agreement with proposed treatment.”** Eur J Anaesthesiol. Nov;25(11):884-90.

Background and objectives: Because patients who are to undergo surgery must give their consent to planned postoperative care, clear and complete information on postoperative pain management should be given. The aim of this quality-of-care study was to evaluate by inquiry the impact of written information describing postoperative pain management on the quality and type of information retained, and patient participation in discussing and agreeing to the postoperative pain management programme during the presurgical anaesthesiology consultation.

Methods: Prospective before and after interventional surveys, each lasting 3 weeks and conducted at a 6-month interval (time required to prepare the written information), used a standardized anonymous questionnaire given to patients after the anaesthesiology consultation. Questions requiring a 'yes' or 'no' response assessed the quality of information and what information was retained by the patient, the extent of the patient's interaction during the discussion with the anaesthesiologist and his/her agreement with the postoperative pain management programme.

Results: Among the 180 before-group patients included, 16.7% reported receiving verbal information during the anaesthesiology consultation, none retained all seven

principal side-effects of morphine, 14.4% considered the information to be thorough, 20.6% understood it, 16.7% claimed that it had helped them participate in the discussion and 14.4% concurred with the postoperative pain management programme. Compared to the before inquiry, significantly higher percentages of the 107 after-group patients (given written information before the anaesthesiology consultation) responded as having received verbal information during the anaesthesiology consultation (57.0%), retained morphine's main side-effects (12.1%), deemed the information thorough (58.9%) and understandable (53.3%), had participated in the discussion (47.7%) and agreed with the postoperative pain management programme (51.4%).

Conclusion: Written information on postoperative pain management distributed before the presurgical anaesthesiology consultation improved the quality of information retained, facilitated discussion with the anaesthesiologist and patient agreement with the postoperative pain management programme.

7. Oshodi, T.O. (2007). “The Impact of preoperative education on postoperative pain”. British Journal of Nursing, Vol 16, No 12

Abstract

This article, the first of two parts, explores the general concept of preoperative education through a literature review. The relatively complex relationships between the ways people perceive a threatening situation, their levels of anxiety, coping styles and postoperative pain is explored. In dealing with these complex relationships, teaching strategies and forms of presentation of preoperative education are also discussed. The second part will examine the impact of preoperative education on postoperative anxiety, pain and recovery. This will be achieved by analysing the evidence available to provide a rigorous appraisal of the literature.

8. Kankkunen, P., et al (2003) „Is the sufficiency of discharge instructions related to children’s postoperative pain at home after day surgery?“ Scand J Caring Sci; 17; 365–372

Background: Parents are expected to alleviate their children’s pain at home after day surgery, and the methods of pain alleviation should be taught to the parents by the hospital staff. However, the lack of information related to children’s pain alleviation has been pointed out in several studies.

Aim: To describe the relationship between the parentrated sufficiency of discharge instructions and the postoperative pain behaviours of 1- to 6-year-old children at home after day surgery.

Method: Questionnaires were handed out to mothers (n =201) and fathers (n = 114) whose child had undergone minor day surgery in 10 Finnish central hospitals.

Percentages and cross-tabulation with chi-square test were used in data analysis.

Ethical issues: The ethical board in each hospital accepted the study. Parental participation was voluntary.

Results: The parents considered the discharge instructions to be fairly sufficient, but criticized their content, method of providing and timing. Insufficiency of the instructions was related to children’s postoperative pain behaviours at home.

Study limitations: The fairly low response rate of this study prevents generalization of the findings to all Finnish parents.

Conclusions: Both the content, the methods of providing and the timing of discharge instruction need to be developed in children's day surgery. [Special attention should be paid to written instructions, which should be given to the parents prior to the day of the child's surgery.](#) Further research is needed to explore the skills of hospital staff in advising the parents and other factors explaining children's postoperative pain at home.

9. [Homer, J. J., and J. Swallow.](#) "Audit Article Audit of pain management at home following tonsillectomy in [children](#)." The Journal of Laryngology & Otology 115 (2001): 205-208.

The pain experienced at home and the burden this places on primary care resources is considerable following tonsillectomy in children. This was [audited by postal questionnaire in 52 patients](#) (36 responders).

Results: We found a significant proportion of patients experiencing moderately severe to severe pain and a high rate of consultation with general practitioners (50%) for pain-related issues. These findings lead to changes in practice which included the provision of five days discharge medication (paracetamol/ibuprofen in non-asthmatics; paracetamol/dihydrocodeine in asthmatics) and [improved written discharge advice](#). On [re-auditing a year later in 100 patients](#) (56 responders), we found reduced rates of consultation with general practitioners (27 %). However, the proportion of children experiencing moderately severe to severe pain was not reduced probably because most children were given the recommended analgesia during the first audit. We also found that paracetamol and ibuprofen was superior to paracetamol and dihydrocodeine for analgesia ($p < 0.05$). Suggestions for further improvements are discussed.