Original Article

The Effect of a Preoperative Educational Film on Patients' Postoperative Pain in Relation to their Request for Opioids

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Abstract:

Guidelines for postoperative pain treatment are based on patients' pain scores. Patients with an intermediate Numeric Rating Scale (NRS) score of 5 or 6 may consider their pain as either bearable or unbearable, which makes it difficult to decide on pain treatment because guidelines advise professionals to treat pain at NRS > 4. Educating patients in using an NRS score for pain might improve adequate pain treatment. A quasi-randomized controlled trial was conducted in which 194 preoperative patients watched the educational film and 183 the control film. Pain scores were considered discordant when patients reported an NRS ≤ 4 and wanted additional opioids or when patients reported an NRS > 4 and did not want additional opioids. Beliefs, fear, and knowledge of pain; pain assessment; and pain treatment were measured by questionnaires. No significant differences in discordant pain scores between the groups were found: relative risk (RR) 0.73, confidence interval (CI) 0.47-1.15 at rest and RR 0.96, CI 0.72-1.28 at movement. Patients in the intervention group had lower NRS pain scores than patients in the control group. In the intervention group, patients had significantly more knowledge and lower barriers to pain management compared with the control group. We did not find a statistically significant reduction in discordant pain scores when comparing the intervention group with the control group. However, patients in the intervention group had significantly lower pain scores, lower barriers, and more knowledge of pain treatment than patients in the control group.

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BACKGROUND

Many patients experience pain after surgery; on the first postoperative day, 30%-43% of patients report moderate or severe pain (Sommer et al., 2008; Svensson, Sjöström, & Haljamäe, 2000). Unrelieved postoperative pain has been shown to increase postoperative complications, prolong hospital stays, and increase the risk of chronic pain (Kehlet, Jensen, & Woolf, 2006; Peters et al., 2007; Watt-Watson, Clark, Finley, & Watson, 1999). International guidelines advise professionals to administer additional analgesics when patients report a Numeric Rating Scale (NRS) pain score greater than 4 (American Pain Society, 1995; Gordon et al., 2005). A previous study showed that patients with NRS 5 or 6 vary in the interpretation of this score (van Dijk et al., 2012). Some patients with NRS 5 or 6 consider their pain as bearable and refuse opioids, whereas other patients with identical NRS scores consider their pain as unbearable and ask for opioids. For adequate pain treatment, it is necessary that patients and professionals share a common lexicon of pain referents. It is conceivable that some patients do not understand the assessment of pain on the NRS. In addition to achieving clarity of understanding and communication with reference to pain and pain management, it is important that patients accept opioids when they are in pain. Previous research showed that patients refuse opioids because of concerns about addiction or side effects of opioid analgesics (Brydon & Asbury, 1996; Oates, Snowdon, & Jayson, 1994). Negative beliefs about opioids, like fear of addiction, can affect the willingness to take opioids to manage pain (Ward & Gatwood, 1994).

Specific information given preoperatively regarding postoperative pain, pain assessment, and pain treatment can help patients obtain better pain assessment and pain relief after surgery. Patient education is defined as the process of influencing patient behavior, resulting in changes in knowledge, attitudes, and skills necessary to maintain or improve health (Stergiopoulou, Birbas, Katostaras, & Mantas, 2007). Preoperative information is considered to be an important tool in helping patients to reduce fear associated with surgery and pain, which will lead to better treatment compliance (Gammon & Mulholland, 1996). Patient education can enable patients to become full participants in their assessment and treatment of pain through improved communication with professionals. The ideal medium to provide information for patients is unclear. Several studies have investigated the use of leaflets to improve the level and quality of information received by patients (Nicolson, Knapp, Raynor, & Spoor, 2009). These studies have reported mixed results. Many patients do not read such forms, and many of those that read them do not completely understand the information provided. Electronic media such as a DVD and streaming video over the Internet have the potential to overcome these known limitations of information leaflets (Ryan, Prictor, McLaughlin, & Hill, 2008).

The aim of the study was to explore the effect of a preoperative educational film on the relation of patients' postoperative NRS score to their request for additional opioids; pain scores; and fear, knowledge, and attitudes concerning opioid use. Our hypothesis was that there would be more patients with a wish for additional opioids while reporting NRS > 4 and fewer patients with a wish for additional opioids while reporting NRS ≤ 4 in the intervention group compared with the control group. Moreover, we expected that patients would have lower pain scores, more knowledge, better attitudes, and less anxiety in the intervention group compared with the control group.

METHODS

Design and Sample

We conducted a quasi-randomized controlled trial in which surgical patients were preoperatively exposed to either an educational film on postoperative pain, pain assessment, and pain treatment or a control film on the hospital's infotainment system. Between November 1, 2011 and March 19, 2012, all adult patients scheduled for elective surgery at the University Medical Center Utrecht were considered for inclusion during their visit to the Outpatient Preoperative Evaluation (OPE) clinic. Patients were excluded when scheduled for ambulatory surgery; having impaired eyesight or hearing; or being unable to read or understand Dutch. Acetaminophen was prescribed to all postoperative patients, and nonsteroidal anti-inflammatory drugs were prescribed when not contraindicated. Depending on the (anticipated) severity of postoperative pain, patients were prescribed opioids. Consequently, a proportion of included patients were receiving opioids at the time of measurement.

Procedure

Eligible patients were given a letter describing the content and purpose of the study at the OPE clinic and were asked to read it while waiting for their preoperative consultation. At the end of the consultation, the patient was asked to participate in the study, and informed consent was obtained. Thereafter, the patient was brought to a separate room where either the educational film or the control film was shown without any disturbance. Afterward, they filled in a questionnaire. For logistical reasons, patients could not be