Assessment of quality of care in acute postoperative pain management

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Abstract

Background/Aim. Managing of acute postoperative pain should be of great interest for all hospital institutions, as one of the key components of patient satisfaction, which indicates quality, as well as the outcome of treatment. The aim of this study was to assess the quality of nursing care in managing acute postoperative pain and to establish factors which influence patients assessment of the same. Method. The investigation was conducted on the sample of 135 patients hospitalised in surgical clinics of the Clinical Centre of Vojvodina in Novi Sad in the form of cross-sectional study, by interviewing patients during the second postoperative day and collecting sociodemographic variables, type of surgical procedure and applied analgesic therapy which were taken from their medical documentation. The modified questionnaire of the Strategic and Clinical Quality Indicators in Postoperative Pain Management (SCQIPP) was used as the instrument of the investigation. The data were processed with suitable mathematical statistics methods such as multivariate analyses of variance (MANOVA), discriminative and other parametric procedures and methods. Roy’s test, Pearson’s coefficient contingency (χ²), multiple correlation coefficient (R) were conducted amongst other univariate procedures. Results. The mean score for the individual items of SCQIPP questionnaire was between 2.0 and 4.7 (scale range 1–5) and the percentage of patients answers “strongly agree” ranged from 4.4 to 77%. The smallest number of positive answers were given by the patients for the item “In order to assess pain intensity, some of the staff asked me at least once in the morning, in the afternoon and in the evening to show the number from 0-10”. Most of the patients (57%) evaluated severe pain during the previous 24 hours, as moderate pain, which represents significantly greater number of patients which complain of severe pain and mild pain (p < 0.001). The analysis of patients evaluation (MANOVA p < 0.05 and discriminative p < 0.05) indicates the existence of significant difference between the assessment of nursing care quality in managing acute postoperative pain as regards to clinics as the place for pain management, patients sex and his expectations. Evaluation from “communication” subscale gives the greatest contribution (24.9%) to the difference between the observed clinics, and the greatest contribution (25.7%) to the difference in evaluation of nursing care quality as regards to patients’ sex has the evaluations from “procedure” subscale. Conclusion. The results of this study show a useful evidence and identify aspects of nursing care in postoperative management of acute pain which are still to be improved. According to the patients’ answers the priority should be given to a regular assessment of the intensity of postoperative pain and the evaluation of the effects of analgesic therapy.

Key words: quality assurance, health care; nursing; pain, postoperative; self-evaluation programs; analgesics.

Uvod/cilj. Značaj interes za sve hospitalne ustanove trebalo bi da bude rezivan akutnog postoperativnog bola kao jednog od ključnih pokazatelja zadovoljstva bolesnika, kvaliteta zdravstvene nege i ishoda lečenja. Cilj ovog rada je da se značajno proceni kvaliteta zdravstvene nege u tretmanu akutnog postoperativnog bola i utvrditi faktore koji utiču na procenu istog od strane bolesnika. Metode. Izrađivanje je provedeno na uzorku od 135 bolesnika hospitalizovanih na hirurškim klinicama Vojvodine u Novom Sadu u obliku studije preseka, anketiranjem bolesnika i evaluacijom kvaliteta zdravstvene nege usled primene analgetika (SCQIPP). Podaci su obradili multivarijantnim analizom varijanse (MANOVA), Royovom testom i Pearsonovom koeficijentom kontingencije. Rezultati. Procenat bolesnika u nekim klinicama je bio veći od onih u drugim u obliku analgetika. Značajno je utvrdilo da je procena kvaliteta zdravstvene nege u tretmanu akutnog postoperativnog bola i utvrdita faktori koji utiču na procenu istog od strane bolesnika. Takođe se utvrdilo da je procena kvaliteta zdravstvene nege u tretmanu akutnog postoperativnog bola i utvrditi faktori koji utiču na procenu istog od strane bolesnika. Značajno je utvrdilo da je procena kvaliteta zdravstvene nege u tretmanu akutnog postoperativnog bola i utvrditi faktori koji utiču na procenu istog od strane bolesnika. Problemi se javljuju u procesu evaluacije analgetika i procenama kvaliteta zdravstvene nege u tretmanu akutnog postoperativnog bola.

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se od 2 do 4,7 (veći skor označava bolji kvalitet nege), a procenat odgovora bolesnika „potpuno se slažem“ varirao je od 4,4% do 77%. Bolesnici su dali najmanje pozitivnih odgovora na obeležje „Da bi procenili jačinu bolja, neko od osoblja me je najameno ćut, posle sada ne uveće moli da pokrižem broj od 0–10“. Većina bolesnika (57%) su nacini bili u pravcu 24 sata ocenila kao umerenog jak bol, što je značajno više od broja bolesnika, koji su se žališi na jač ili blag bol (p < 0,001). Analiza ocena bolesnika (MANOVA, p < 0,05 i diskriminanta, p < 0,05) ukazala je na značajno razliku izmedu procene kvaliteta zdravstvene nege u zbrinjavanju akutnog postoperativnog bola u odnosu na kliniku kao mesto zbrinjavanja bola, pol bolesnika koji je očekivao očekivanja nege.

Ključne reči: zdravstvena zaštita; obezbeđenje kvaliteta; sestrinstvo; bol, postoperativni; samoprocena, programi; analgetici.

Introduction

There has been an increasing interest in acute postoperative pain management for several decades. The examples of most frequent obstacles of inadequacy of postoperative pain management are inadequate pain assessment, variability of individual experience of postoperative pain, lack of systematic follow up and documented pain assessment, the absence of interaction between patients and healthcare providers, negative attitude to the use of analgesia. Despite the advancement in knowledge of pathophysiological mechanisms of acute postoperative pain, pharmacological and technological development, epidemiological studies reveal insufficiency in pain relief and significant prevalence of acute postoperative pain. The results of some studies show that 40 to 70% of surgical patients experience moderate and severe postoperative pain.

Regular assessment of healthcare quality in managing acute postoperative pain is necessary for several reasons. Allowing patient to experience postoperative pain is unacceptable and unethical when tools and educated healthcare providers are available. The right of pain relief should be basic human right. Pain delays postoperative recovery and may cause medical complications associated with inadequately treated acute pain (impairing mobility, respirations and coughing, breathing problems and forming venous thrombosis and hypoxia). Severe, acute pain after surgical procedures may progress to chronic postoperative pain.

Inefficient treatment of acute postoperative pain may result in obvious material and immaterial expenses and losses. Material expenses are the ones in the system of health care (prolonged hospitalization, the increased use of medicaments, medically related work absenteeism). Immaterial losses cause emotional anxiety and patients dissatisfaction.

Significant goals in managing postoperative pain include minimizing or eliminating discomfort, facilitating the recovery process, and avoiding complications and transition of acute pain into chronic pain. Nurses from surgical ward and clinics are also responsible for achieving these goals. Nurses interventions in managing acute postoperative pain comprise recognition of physiological, behavioral and emotional signs and pain symptoms and assessment of pain intensity as the “fifth vital sign”, recording the pain, having knowledge of available pharmacological and non pharmacological approaches for pain relief. Since nurses spend 24 hours with patients, in most cases health care is the foundation of quality of work in the organization, and pain management should be the very core of nursing care.

The modified questionnaire of the Strategic and Clinical Quality Indicators in Postoperative Pain Management (SCQIPP), developed by Ewa Idvall and her associates in 2002, was used as the instrument of investigation.

The last version of Strategic and Clinical Quality Indicators in Postoperative Pain Management Questionnaire was used comprising 14 items in four subscales (communication, action, trust and environment) converted into statements. The format of typical five–level Likert item was used to measure level of agreement or disagreement with the statements which represent individual items in the questionnaire. The intensity of description ranges from 1 – strongly disagree, 2
The questionnaire contains two supplementary questions concerning general patient satisfaction with postoperative pain management and two concerning pain intensity and general satisfaction. Patients scored “How dissatisfied or satisfied are you with the postoperative pain treatment” according to 11-level scale, with 0 describing strongly agree, and “yes” or “no” responds to the question “Tell me if you experienced more severe pain than you anticipated”.

The supplementary questions concerning pain intensity (the worst pain experienced during the last 24 hours, as well as right now pain), measured with numerical scale – Numeric Rating Scale (NRS), was taken from multidimensional i.e. the Brief Pain Inventory using numeric 0 to 10 scales, with 0 being "none", 1 to 3 “mild”, 4 to 6 “moderate”, and 7 to 10 “severe” pain. In recent studies the questionnaire was tested by checking the domain scale internal consistency (Cronbach’s alpha) which was \( \alpha = 0.84 \).

The study was examined and approved by the Ethics Committee of Medical Faculty and Ethics Committee of Clinical Centre of Vojvodina in Novi Sad. In order to make the patients anonymous the interviews were conducted without taking patients personal data and all the data were treated in strict confidence. The patients were informed on the independency of the researcher i.e. on no affiliation to the hospital.

Non-parametric procedures according to frequency of modalities were used to analyze patients assessments of all dimensions of health care quality in postoperative pain management since they have non-parametric characteristics. However, in order not to lose information, finding the finest correlations and knowledge, on non-parametric values, data scaling was done on contingency tables. Since the scaling of data does not exclude the use of non-parametric tests, the multivariate analysis of variance (MANOVA) for scaled data, discriminative and other parametric procedures and methods were possible. Furthermore, Roy’s test, Pearson’s coefficient contingency (\( \chi^2 \)), multiple correlation coefficient (\( R \)) was conducted amongst other univariant procedures.

**Results**

The research was conducted on the sample of 135 inpatients of which 40 inpatients (29.6%) participated in the Clinics of Abdominal, Endocrinological and Transplantation Surgery, and 29 inpatients (21.5%) in the Clinics of Neurosurgery. The same numbers of 33 patients (24.4%) were both in the Clinics of Orthopedics and in the Clinics of Urology.

Most patients were male, 71 (52.6%) and 64 (47.4%) were female. The mean age of the surveyed patients was 47.2 ± 15.9 years. Several patients asked the researcher to read and fill in the questionnaire instead of them.

The patients underwent different surgical procedures (Table 1).

It was established from medical documentation that the most often administered analgesic on the first postoperative day was metamizol (Novalgetol) (67, 39.6%) and ketorolak (Zodol) (61, 36.1%) which is much more than the use of tramadol (Trodon) (31, 18.3%; \( p < 0.001 \)), metamizol (Baralgin) (5, 3%; \( p < 0.001 \)), diklofenak (Diklofen) (4, 2.4%; \( p < 0.001 \)) and nimesulid (Nimulid) (1, 0.6%; \( p < 0.001 \)). Medications were administered intravenously, subcutaneously and orally.

More than a half of the patients, 78 (57.8%), answered they hadn’t experienced worse pain than they anticipated, in relation to 57 (42.2%) patients who had experienced worse pain than they anticipated \( (p < 0.05) \). Most of the patients, 77 (57.0%), assessed the worst pain in the last 24 hours as moderate pain, which is significantly more than the number of patients complaining of extreme pain 47 (34.8%; \( p < 0.001 \)) and mild pain (7.4%; \( p < 0.001 \)). One of the patients did not experience any pain. The lowest pain intensity in the last 24 hours and right now pain are shown in Table 2.

**Table 1**

| Surgical procedures | n  | %   |
|--------------------|----|-----|
| Neurosurgery       |    |     |
| Interhemilaminectomy | 26 | 19.2|
| Intracranial tumor | 3  | 2.2 |
| Abdominal surgery  |    |     |
| Hernietomia        | 15 | 11.1|
| Cholecistectomy    | 23 | 17.0|
| Colorectal surgery | 2  | 1.4 |
| Orthopedics        |    |     |
| Alorthoplastica genus | 10 | 7.4 |
| Alorthoplastica coxae | 7  | 5.1 |
| Ligamentoplastica  | 16 | 11.9|
| Urology            |    |     |
| Radical prostatectomia | 7 | 5.1 |
| Nephrectomia       | 6  | 4.4 |
| Cystectomy         | 4  | 2.9 |
| Lymfadenectomia    | 4  | 2.9 |
| Semicastratio      | 3  | 2.2 |
| Transuretheral resection of prostate | 3 | 2.2 |
| Ureterolithotomia  | 6  | 4.4 |

| Total              | 135| 100.0|

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**Table 2**

| Pain intensity scale | No pain (0) | Mild pain (1–3) | Moderate pain (4–6) | Severe pain (7–10) |
|---------------------|-------------|-----------------|---------------------|-------------------|
| IB1                 | 1           | 10              | 74                  | 47                |
| IB2                 | 8           | 59              | 113                 | 83.7*             |
| IB3                 | 8           | 59              | 103                 | 76.3*             |

\( \text{IB}_1 \) – the worst pain during last 24 hours; \( \text{IB}_2 \) – the lowest pain intensity in the last 24 hours; \( \text{IB}_3 \) – right now pain (the second postoperative day); \( * p < 0.001 \)
Mean score of individual SCQIPP questionnaire items (n=14) ranged from 2.0 to 4.7 (higher score marks better care quality), and percentage of “strongly agree” scores varied from 4.4% to 77%. Table 3 shows that the lowest number of positive answers was for the item “To determine my level of pain, a member of the staff asked me to pick a number between 0 and 10 (or make a mark on a straight line) at least once every morning, afternoon, and evening”, which means the lack of regular assessment of pain intensity as the fifth vital sign in every day nursing care.

Analysis of patients’ evaluation (MANOVA $p < 0.05$ and discriminative $p < 0.05$) indicated the existence of significant difference between the assessment of health care quality in managing acute postoperative pain as regards to clinics as the setting of pain management for most items in all four subscales, with exception of scores for PV4 (“The nurses believe me when I tell them about my pain” $p = 0.106$) and PS1 (“After my operation I talked with a doctor or nurse about how I wanted my pain to be treated” $p = 0.139$). Discriminative coefficient gave the greatest contribution to the difference between the surveyed clinics (with starting point at greatest difference) for the patients’ scores for the following items PV1 (.141), PV2 (.138), PS1 (.137), K2 (.128), K1 (.126), PV2 (.116) and PS1 (.096). Other items showed lower discriminative coefficient. The results of this research suggest that health care characteristics ordered by the degree of discrimination as regards to clinics are following for the items:

- \( PV1 \) (Even if I did not always ask for it, I was given pain medication) in the Clinics for Abdominal Surgery was agree*, Clinics for Orthopedics and Trauma was strongly disagree*, and Clinics for Urology neither agree nor disagree*.
- \( PS3 \) (The staff asked me about the pain I had when I breathed deeply, sat up, or moved around) in the Clinics for

### Table 3

| Scqipp questions                                                                 | “agree” | “strongly agree” |
|----------------------------------------------------------------------------------|---------|-----------------|
| **Quality of care indicators converted into statement**                           | \( \bar{x} \) | SD | n | % | n | % |
| **Subscale: Communication**                                                      |         |     |   |   |    |   |
| 1. Before my operation I was told about the type of pain treatment I would be offered after surgery (K1) | 3.4     | 1.2 | 45 | 33.33 | 25 | 18.52 |
| 2. When nurses come on duty, they know “everything” about how much pain I have had and the pain treatment I have had received (K2) | 4.0     | 1.0 | 41 | 30.37 | 53 | 39.26 |
| 3. The nurses and doctors cooperated in treating my pain (K3)                     | 4.6     | 0.8 | 22 | 16.30 | 100 | 74.07 |
| **Subscale: Action**                                                             |         |     |   |   |    |   |
| 4. After my operation I talked with nurse about how I wanted my pain to be treated (PS1) | 3.8     | 1.3 | 49 | 36.30 | 46 | 34.07 |
| 5. I received support or help in finding a comfortable position in bed to help avoid pain (PS2) | 4.2     | 1.0 | 49 | 36.30 | 63 | 46.67 |
| 6. The staff asked me about the pain I had when I breathed deeply, sat up, or moved around (PS3) | 4.1     | 1.1 | 40 | 29.63 | 63 | 46.67 |
| 7. To determine my level of pain, a member of a staff asked me to pick a number between 1 to 10 at least once in the morning, afternoon and evening (PS4) | 2.0     | 1.1 | 10 | 7.41 | 6 | 4.44 |
| **Subscale: Trust**                                                              |         |     |   |   |    |   |
| 8. Even if I did not always ask for it, I was given pain medication (PV1)         | 3.6     | 1.2 | 52 | 38.52 | 31 | 22.96 |
| 9. The nurses helped me with pain treatment until I was satisfied with the effects of pain relief. (PV2) | 3.3     | 1.2 | 43 | 31.85 | 23 | 31.85 |
| 10. The nurses are knowledgeable about how to relieve my pain (PV3)               | 4.4     | 1.0 | 36 | 26.67 | 77 | 57.04 |
| 11. The nurses believe me when I tell them about my pain (PV4)                    | 4.7     | 0.5 | 26 | 19.26 | 104 | 77.04 |
| **Subscale: Environment**                                                        |         |     |   |   |    |   |
| 12. I was given the opportunity for peace and quiet so I could sleep at night (O1) | 4.2     | 1.0 | 51 | 37.78 | 65 | 48.15 |
| 13. I have a pleasant room (O2)                                                   | 4.1     | 1.0 | 57 | 42.22 | 54 | 40.00 |
| 14. There have been enough nurses on duty for someone to respond quickly to my request for pain relief (O3) | 3.9     | 1.1 | 29 | 21.48 | 51 | 37.78 |

SCQIPP – Strategic and Clinical Quality Indicators in Postoperative Pain

The aim of the research and methodological approach determined the analysis of patients assessment of surveyed indicators of health care quality in managing acute postoperative pain, intensity of extreme pain (IB1) and mildest pain (IB2) during the last 24 hours and right now pain intensity (IB3) in relation to clinics of inpatients as the setting of pain management, their expectations of more severe pain and patients gender.

SCQIPP – Strategic and Clinical Quality Indicators in Postoperative Pain

Mihailović D, et al. Vojnosanit Pregl 2009; 66(2): 156–162.
Neurosurgery was disagree* and strongly disagree*. In the Clinics for Orthopedics and Trauma was neither agree nor disagree* and disagree, and Clinics for Urology strongly disagree (*p < 0.05).

Analysis of patients’ responds to pain intensity (MANOVA p < 0.05 and discriminative p < 0.05) established a significant differences amongst four surveyed clinics in relationship to IB1 assessment (worst pain; p < 0.001), and without difference for patients’ assessment of IB2 (pain now; p = 0.153) and IB2 (the lowest pain; p = 0.183), with discriminative coefficient for IB1 (.126), IB3 (.030) and IB2 (.024) assessment.

The patients in neurosurgery scored IB1 (the worst pain) as: mild pain, patients in abdominal surgery as severe pain* and mild pain, while patients in orthopedics and trauma scored as moderate pain* (*p < 0.05).

Figure 1 shows that the greatest contribution to the difference of clinics as the setting of pain management has the item scores of subscale “communication” (24.9%) and “action” (21.5%).

![Fig. 1 – Contribution of patients’ scores (%) in subscales and pain intensity assessments to different clinic settings](image)

Analysis of patients’ scores of quality of care in managing postoperative pain (MANOVA p < 0.05 and discriminative p < 0.05) established the significant differences between patients expectations of postoperative pain intensity in relation to overall assessments of health care quality with discrimination for PS1 (.188), K3 (.104), K1 (.080), PV4 (.060) and PS2 (.052) scores.

According to the patients scores of item K1 (“The nurses and doctors have cooperated in treating my pain”) those patients with pain worse than they expected scored: strongly disagree and disagree, while patients without severe pain scored strongly agree, and K1 (“Before my operation I was told about the type of pain treatment I would be offered after surgery”) for patients with worse pain than they expected scores were strongly disagree, disagree and neither agree nor disagree, while patients without severe pain scores were: agree and strongly agree (p < 0.05).

Analysis of the patients scores of quality of postoperative pain intensity (MANOVA p < 0.001 and discriminative p < 0.001) suggests that there is a significant difference between patients expectation and IB1 assessment (the worst pain; p < 0.001), IB1 (pain now; p < 0.001), IB2 (the lowest pain; p < 0.05), with discrimination for IB1 (.432), IB2 (.215), IB3 (.000). The results show that patients with worse pain than they expected IB1 (the worst pain) scored: none, mild pain, moderate pain (p < 0.001).

Figure 2 represents pain intensity scores (33.2%) and subscale “action” scores (21.4%) giving the greatest contribution to the difference among the patients in relation to their expectation of postoperative pain intensity.

![Fig. 2 – Contribution of scores (%) in subscales and pain intensity assessments to difference in relation to worse postoperative pain expectation](image)

Analysis of the patients scores of quality of postoperative pain intensity (MANOVA p < 0.05 and discriminative p < 0.05) suggests that there is a significant difference between patients gender in scoring most of items in all four subscales, and there was no established difference for item PV4 (“The nurses believe me when I tell them about my pain”) p = 0.708). Discriminative coefficient suggests that the greatest contribution to gender discrimination were scores on PS2 (.158), PV1 (.085), PS1 (.072), O1 (.068), PS4 (.061), O2 (.048), while the other items have significantly lower discriminative coefficient.

It is necessary to mention that assessment indicators of the subscale “trust” have latent items contributing to discrimination of genders together with other items although they did not show a significant difference, such as PV2 and PV4.

Characteristics of gender can be inferred from this research according to discriminative degree order with the starting point at highest difference for the following items: PS2 (“I received support or help in finding a comfortable position in bed to help avoid pain”) male patients scored neither agree nor disagree and strongly agree, while female patients scored disagree and agree, while female patients scored disagree and agree, while female patients scored disagree and agree; PV1 (“Even if I did not always ask for it, I was given pain medication”) men scored the following items strongly disagree, and women agree (p < 0.05).

Analysis of patients scores of quality of postoperative pain intensity (MANOVA p < 0.001 and discriminative p < 0.001) suggests that there is a significant differences between genders in scoring IB1 (the lowest pain; p < 0.001), IB3 (the worst pain; p < 0.05). There was no difference for...
IB3 (pain right now; p = 0.237) scores, and discriminative coefficient indicates the greatest contribution to discrimination between genders in scores on IB2 (.131), IB1 (.001), and then on IB3 (.000). Thus, it can be concluded that women scored IB3 (the lowest pain) as moderate pain, and men: none and mild pain (p < 0.001).

Figure 3 suggests that scores of the subscale “action” (25.6%) and pain intensity (22.8%) contribute most to gender differences between the patients.

Discussion

The results of this study suggest that the question of satisfaction with managing postoperative pain should be considered incomplete for the assessment of health care quality since it indicates that regardless of the presence of severe and moderate pain, a significant number of patients express satisfaction with the care. There were similar results in other studies, which can be explained by the fact that our patients traditionally assume postoperative pain as inevitable and therefore they have to suffer pain, and very few patients were aware of the standards of health care they may receive and of potential benefits of adequate pain relief.

However, Cronbach’s alpha from initial psychometric analysis (α = .84) of questionnaire and its subscales called “communication”, “action”, “trust” and environment comprising significant aspects of health care gave valuable aspects for the assessment of postoperative care management quality. The subscale “communication” comprises: informing and educating patients, as well as team work. “Action” scale means: timely noticing and treating signs and symptoms of postoperative pain, performing pre- and postoperative care, general care and giving emotional support to patients. “Trust” subscale comprises carrying out doctors orders, care of patients, competence and nurses attitude, and “environment” subscale comprises: patients privacy guarantees, auxiliary staff, ward rooms and equipment.

A dilemma exists about the “high” quality care. Author of the SCQIPP thinks there is only a small discrepancy allowance in percentage of the patients scores “strongly agree” or, the scope of scores “strongly disagree” and “disagree” ranging from 0.5 to 3%.

Taking this criterion into account, the most important aspect of nursing care in postoperative pain, which needs to be improved, is a regular pain assessment by applying some of one-dimensional scales. Since this item was scored “strongly disagree” and “disagree” by 105 (77%) patients it can be concluded that a regular assessment of pain intensity is not common practice neither among nurses not among doctors and most likely indicates to organizational problem of surveyed clinics. Regular and documented assessment of pain intensity has been a problem in other countries, too.

In Holland, an indicator of quality in postoperative pain management is almost lower than four (in scale ranging from 0 to 10) in the last 72 hours after operation divided by the number of evaluated patients. However, in spite of legislative regulations of recording quality indicators only a few hospitals can make complete results public, because standards for documenting pain have not been implemented yet in most of Holland hospitals. In our country there is a regular assessment of pain intensity according to the Regulations of Health Care Quality Indicators as obligatory indicator of quality of work, but only in institutions for health care of old people.

The patients responses showed that a lack of monitoring effects of analgesic therapy in nursing care is very often the case. It is recommended to monitor effects of analgesic therapy in treating postoperative pain together with a regular pain assessment because of possible therapy change in accordance with patients reactions.

Trust as one of the basic principles of pain management was fulfilled since nurses believe patients have pain. This finding points out patients trust in the staff and nurses acceptance of definition of pain by Margo McCaffery, international expert on health care of patients with pain. She defined pain as “whatever the experiencing person says it is, existing whenever s/he says it does.” Another positively scored aspect of postoperative pain was a team work of doctors and nurses.

Surgical clinic as a setting for postoperative pain management turned out to be a significant factor influencing the quality of nursing care regarding acute postoperative pain and it was confirmed by the results of other studies. The quality of nursing care in these clinics gives an explanation, but we need further research to confirm this.

The results show that gender and patients expectations in relation to postoperative pain have the most significant influence on pain intensity assessment and consequently on quality of pain management. More than a half of patients with worse pain than they anticipated have lower mean score in “action” and “communication” subscales. These findings point out the need for patients to be informed about pain by nurses before the surgical procedure and different methods of pain management, the importance of their active participation in treatment, as it is performed by nurses in most European countries. Sherwood emphasized that patients show greater pleasure with postoperative treatment of acute pain if they were educated through early nursing interventions how to treat their pain, how to be active partners in planning of their postoperative pain management.
The existing drawbacks can be overcome by professional education of nurses and establishment of a Postoperative Pain Management Service. Rawal Swedish model would be most acceptable for our conditions and it is performed by nurses under supervision of one anesthesiologist. According to this model, nurses from the Service are entitled to perform education of patients and ward nurses in treating pain, but they are also obliged to prepare guidelines for treating acute pain together with surgeons.30, 32

Conclusion

This study showed a lack of regular assessment of pain intensity and follow-up of effects of analgesic therapy in professional nursing care, nurses trust in patients when they report pain and cooperation with doctors in postoperative pain management, as well as, surgical clinic as a setting for pain management, gender and existence of worse pain than expected comprise significant factors which influence score on quality of acute postoperative management care.

Pain relief itself is not enough for the improvement of postoperative stay, but in addition to other procedures and measures it is a precondition for improving outcomes of care and treatment. Thus, treatment of postoperative pain as an essential part of care in surgical wards should be given special attention. Professional nurse services should have system of quality planning, performing, evaluating and improving care, comprising measurable aims and quality indicators. Since nurses represent most numerous group of professional health care workers and the ones who are closest to patients, defining and using indicators of their performance should be a priority for health care managers.

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