

Lewandowska Anna, Misiąg Anna, Lewandowski Tomasz, Laskowska Barbara. Standards of analgesic treatment versus hospital practice. *Journal of Education, Health and Sport*. 2017;7(7):160-169. eISSN 2391-8306. DOI <http://dx.doi.org/10.5281/zenodo.825215>
<http://ojs.ukw.edu.pl/index.php/johs/article/view/4598>

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part B item 1223 (26.01.2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7

© The Author 2017;

This article is published with open access at Licensee Open Journal Systems of Kazimierz Wielki University in Bydgoszcz, Poland

Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.

This is an open access article licensed under the terms of the Creative Commons Attribution Non Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 25.06.2017. Revised: 02.07.2017. Accepted: 10.07.2017.

Standardy leczenia przeciwbólowego a praktyka szpitalna Standards of analgesic treatment versus hospital practice

Anna Lewandowska¹, Anna Misiąg¹, Tomasz Lewandowski², Barbara Laskowska¹

¹Institut Ochrony Zdrowia, Państwowa Wyższa Szkoła Techniczno-Ekonomiczna w Jarosławiu, ul. Czarnieckiego 16, 37-500 Jarosław

²Institut Inżynierii Technicznej Państwowa Wyższa Szkoła Techniczno-Ekonomiczna w Jarosławiu, ul. Czarnieckiego 16, 37-500 Jarosław

¹Institute of Healthcare, State School of Technology and Economics in Jarosław, address: Czarnieckiego Street 16, 37-500 Jarosław

²Institute of Technical Engineering State School of Technology and Economics in Jarosław, address: Czarnieckiego Street 16, 37-500 Jarosław

Słowa kluczowe: ból, choroba nowotworowa, standardy

Key words: pain, neoplastic disease, standards

Contact address:

dr n. med. Anna Lewandowska

ul. Czarnieckiego 16, 37-500 Jarosław

phone: 698757926; e-mail: am.lewandowska@poczta.fm

Streszczenie

Wprowadzenie: Leczenie bólu jest fundamentalnym prawem pacjenta. Nowoczesna medycyna coraz lepiej poznaje mechanizm i istotę bólu, dysponując coraz to skuteczniejszymi środkami terapeutycznymi, pozwalającymi kontrolować ból. Wielokierunkowe leczenie bólu wykorzystuje różne techniki i leki, pozwala zmaksymalizować efekt przeciwbólowy przy jednoczesnej redukcji działań niepożądanych każdej z metod.

Cel pracy: Celem pracy jest ocena stosowania standardów leczenia przeciwbólowego w praktyce szpitalnej.

Materiał i metoda: Badaniem objęto 100 pacjentów z bólem ostrym poddanych zabiegom operacyjnym chirurgicznym i ortopedycznym oraz z bólem przewlekłym przebywających w oddziale neurologicznym. Dobór pacjentów był losowy, obejmował pacjentów szpitala na terenie województwa podkarpackiego z certyfikatem „Szpital bez Bólu”. Badaną grupę stanowiło 57% kobiet oraz 43% mężczyzn, zamieszkujących tereny miejskie (44%) oraz wiejskie (56%).

Metodą badawczą wykorzystaną w pracy jest sondaż diagnostyczny, analiza dokumentacji oraz pomiar bólu.

Wyniki: 42% pacjentów odczuwa ból z przerwami, według 37% trudno określić jak często występują u nich dolegliwości bólowe, natomiast 21% w sposób ciągły odczuwa dolegliwości bólowe. Pacjenci ocenili swój ból jako ostry (26%), ból trudny do określenia (20%), ból rwący (16%), piekący (15%), ból promieniujący (10%), tępy (8%), kłujący (3%) i pojawiający się przy dotknięciu (2%). Oceniając natężenie bólu, 53% respondentów stwierdziło, że odczuwają średnie natężenie bólu, 33% ból o dużym natężeniu. O możliwościach oraz o ewentualnych metodach uśmierzenia bólu pooperacyjnego najczęściej pacjentów informują pielęgniarki na sali pooperacyjnej (54%), lekarz anestezjolog (26%).

Wnioski: Ból ogranicza funkcjonowanie fizyczne pacjenta. Stosowane skale VAS i VRS pięciostopniowe są wystarczające w profilaktyce i łagodzeniu bólu, ale nie w pełni czytelne i zrozumiałe dla wszystkich pacjentów. Edukacja pacjenta w dużej mierze wpływa na poziom świadomości i umiejętności oceny bólu.

Summary

Introduction: Pain remedying is a fundamental patient law. Modern medicine is acknowledging the mechanism and the warp of pain, commanding more efficient therapeutic means allowing to control the pain. Multidirectional pain therapy uses variable techniques and medicines which enables to maximize the analgesic effect during the reduction of side effects of each method.

Objective: Evaluation of applying standards of analgesic treatment in hospital practice.

Material and methods: There were 100 people with severe pain who underwent surgical and orthopedic treatment, as well as, the ones with chronic pain, staying in neurological ward who took part in the examination. Choice of examined patients was random and embraced hospitals patients in the Podkarpackie voivodeship with “Szpital bez Bólu” (eng.: Hospital without pain) certificate. Examined group comprised of : 57% of women and 44% of men, living in rural (56%) and urban (44%) area. Research methods used in the examinations, were diagnostic opinion poll, records analysis and pain measurements.

Results: 42 % of patients can feel the pain intermittently, 37% is not able to estimate how often do pain ailments occur, however, 21% of people suffer from chronic pain ailments. Patients have estimated their pain as follows: severe (26%), difficult to determine (20%), shooting (16%), burning (15%), radiating (10%), dull (8%), stinging (3%) and the one which appears when touched (2%). Having estimated the pain intensity, 53% of respondents claimed that they feel medium pain intensity and 33% claimed to have felt great pain. Nurses in the post-op (54%) and anesthesiologist (26%) are the one, to inform patient about possibilities and eventual methods of post-operative pain management.

Conclusions: Pain limits physical functioning of patient. Five-stage scales included in the examination, were VAS and VRS which are sufficient in prophylaxis and pain alleviation but not entirely readable and understandable for all patients. Education of patient influences on the awareness and abilities of evaluating the pain.

Introduction

Pain is a psychosomatic phenomenon, complex physiological experience, emotional, as well as, social and spiritual component, subjective sensation, unpleasant, triggering fear, anxiety and even anger. Pain represents warning and protective part in our life, gives us signals of potential danger, releasing instinctive and behavioral response of the organism to limit the effect of damage to minimum. It finds its reflection in a definition of International Association for the Study of Pain (IASP), which says, that, pain is unpleasant sensual and emotional feeling, connected with actual or potential cells damage or described as such damage [1]. Anita M. Unruh, Anthony Wright, G. David Boxtor describe pain as common problem of modern societies. Pain, accompanying injuries, as well as diseases of our lives versus way of describing it by individual, are influenced by: age, sex, disability, as well as, social and cultural norm concerning permissible way of behavior regarding pain. Authors describe pain as, deep personal experience, with significant emotional and sensory component. Unfortunately, for some it is everyday experience that influences negative on their self-assessment, performing day-to-day duties, relationships, physical activity, emotional state and level of quality of a person. [2,3].

Pain remedying is a fundamental patient law. Modern medicine is acknowledging the mechanism and the warp of pain, commanding more efficient therapeutic means allowing to control the pain, at least partially. Team of polish experts summoned by Polish Association for the Study of Pain, Polish Society of Anaesthesiology and Intensive Care, Polish Society of Surgeons, Polish Society of Gynecologists and Obstetricians, Polish Society of Orthopedics and Traumatologic have settled the following criteria, for correct quality elevation system organization, of conducting in severe and chronic pain of cancer origin: participation of medical staff in training course on assuaging a post-operative pain, monitoring of pain intensity, informing patients about possibilities and methods of pain assuaging, keeping records regarding pain evaluation and applied procedure in accordance with recommendations of pain palliating, as well as, monitoring of eventual side effects of applied therapy [2,4].

Objective

Evaluation of applying standards of analgesic treatment in hospital practice.

Material and methods

There were 100 people with severe pain who underwent surgical and orthopedic treatment, as well as, the ones with chronic pain staying in neurological ward who took part in the examination. Choice of examined patients was random and embraced hospital patients in the Podkarpackie voivodeship with “Szpital bez Bólu” (eng.: Hospital without pain) certificate. Examined group comprised of 57% of women and 43% of men, aged 19-70, average age 45 years, living in rural (56%) and urban (44%) area.

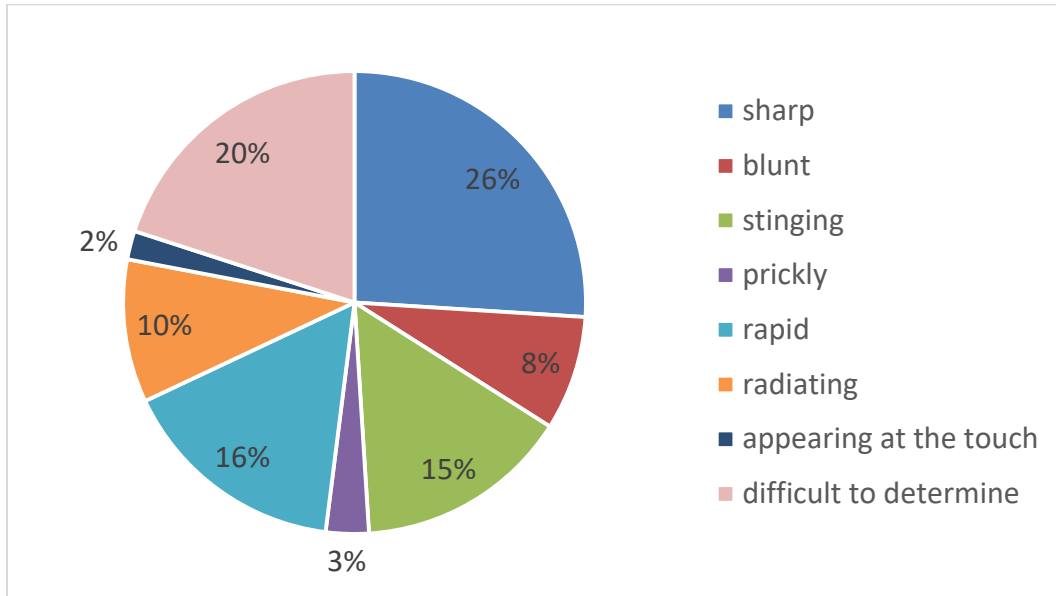
Research methods used in the examinations, were diagnostic opinion poll, records analysis and pain measurements. Method used in the research was VAS- to assess pain intensity, assessment sheet for sensory and emotional pain dimension, NRS numerical scale evaluating pain intensity, QLQ-C30 (Quality of Life questionnaire) questionnaire and self survey consisting of 27 questions about pain, pain assessment and patients' life quality.

All the statistical calculations have been performed by use of data analysis software system STATISTICA developed by StatSoft, Inc. (2011), version 10.0. www.statsoft.com., statistical package R version 2.15.1, and Microsoft Excel spreadsheet.

Results

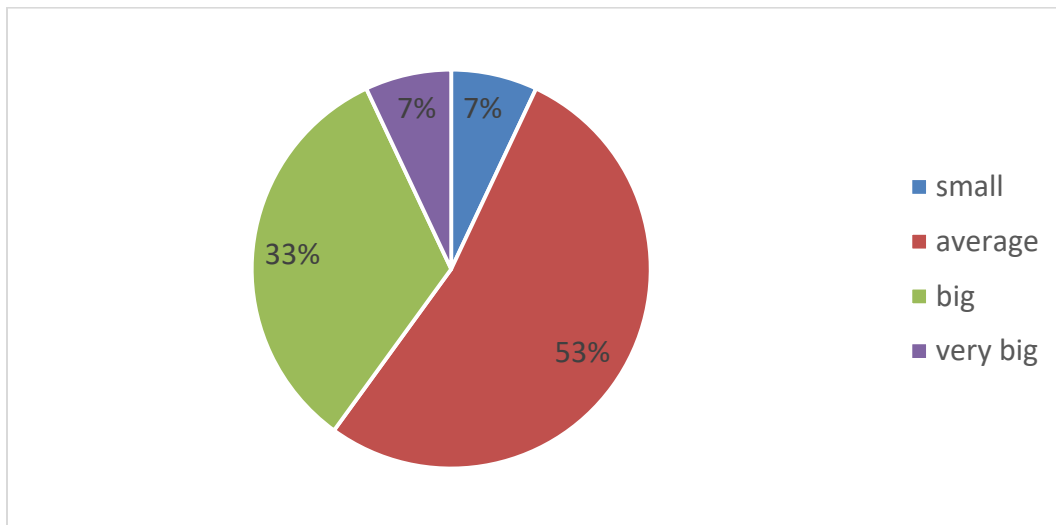
Examined population due to age, represent people between 40 and 59 years of age (41%), 18-39 (36%) and above 60 years of age (23%). Largest group comprised of people with secondary education (40%), vocational education (30%), elementary (17%), university education (13%). 82% of researchers may count on support from a family, and at least 4% claimed that they cannot count on such support. 42% of patients feel a pain intermittently, according to 37% it is hard to determine how often do they feel pain discomfort, however, 21% can feel chronic pain. Factors which causes pain, are: injuries (32%), surgery (22%), wounds (12%). Patients have assessed their pain as severe (26%), hard to determine (20%), shooting (16%), burning (15%), radiating (10%), dull (8%), stinging (3%), the one which appears when touched (2%) (figure 1).

Figure 1. Description of patient searing pain.



Having estimated the pain intensity, 53% of respondents claimed that they feel medium pain intensity and 33% claimed to have felt great pain, 7% have felt high intensity of pain, and another 7% insignificant intensity of pain (figure 2).

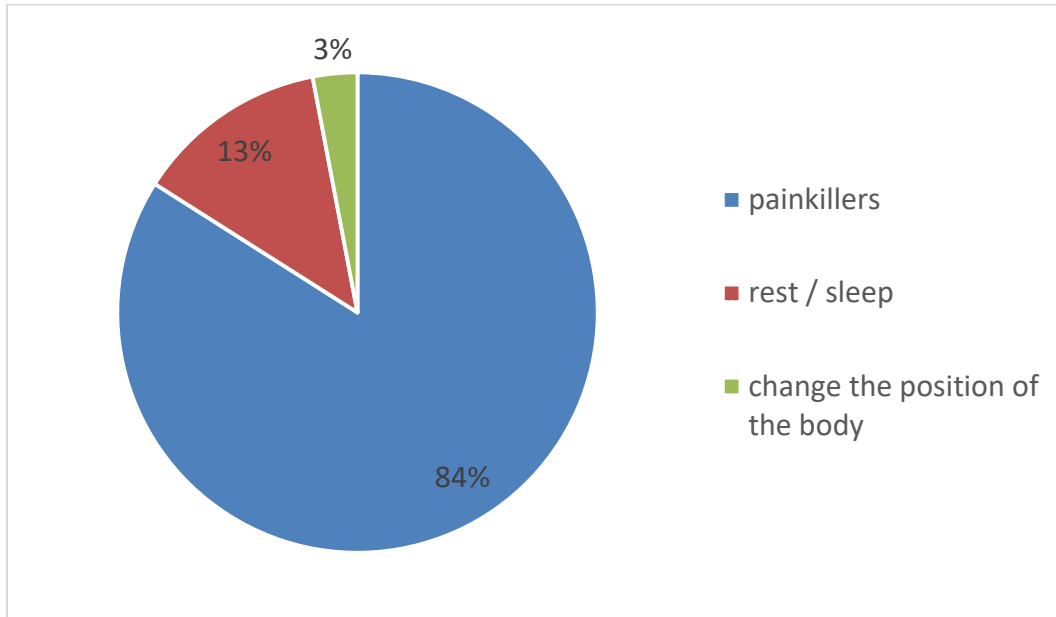
Figure 2. Intensity of pain



46% of respondents feel pain after active physical exertion, tiredness triggers pain among 12%, however, stress causes pain among (5%), whilst 37% of respondents do not know what causes

pain or increases pain. To a question, what brings a relief they answered: application of painkillers (84%), rest/sleep (13%), changing body position (3%) (figure 3).

Figure 3. Factors that relieve pain

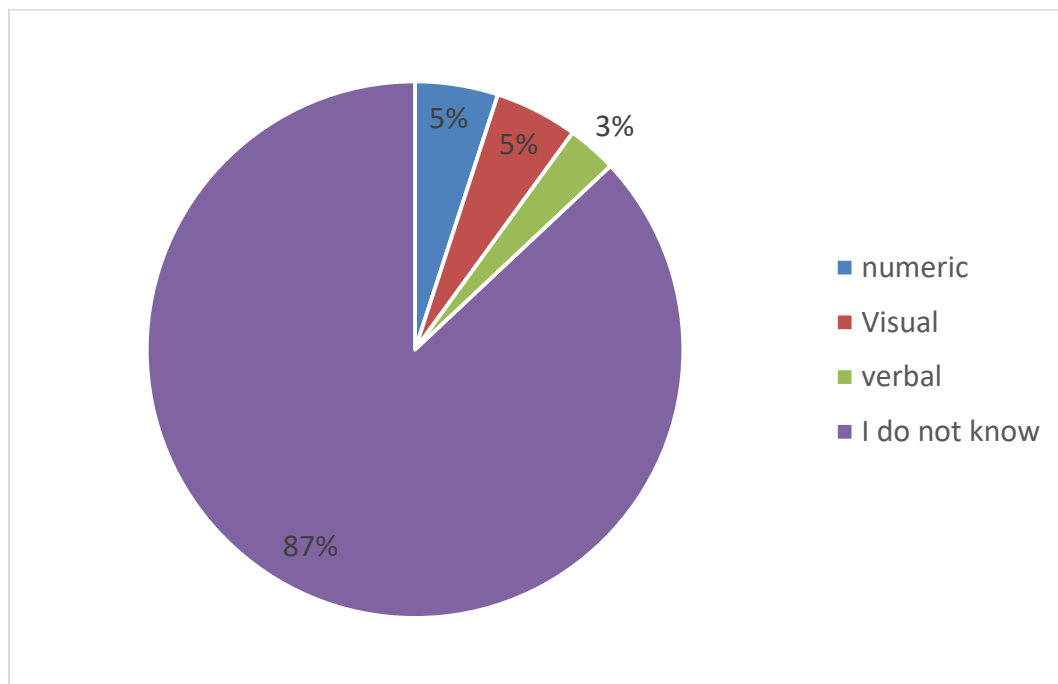


Majority of surveyed (62%) had admitted, that they cannot rest in the night because of pain, however, 38% of questioned said, that pain do not interfere night rest. Data analysis shows that, the biggest group consisted of patients who had the operation conducted in scheduled way (64%), while 36% of patients underwent medical procedures summarily. 98% of surveyed, confirmed being informed of possibility of anaesthetic exhaustively, only 2% claimed that given information were not sufficient. Nurses in the post-op (54%) and anesthesiologist (26%) are the one, to inform patient about possibilities and eventual methods of post-operative pain management. The most common anaesthetic were, general anaesthesia (60%) and epidural (40%). Main fear reason were, a pre-operation fear connected with immobilization (59%), fear of treatment (28%), anaesthetic (7%), post-op pain (4%), as well as, fear of complications (2%). The use of premedicants before the surgery, brought the following effects: 44% considered that fear was partially reduced, 28% claims, not to have felt fear after using premedicants, 16% have not felt any positive effect, however, 12% could not determine their feelings after using premedicants. In case of applied VAS scale, 80% of respondents did not have any troubles in

determining pain on the scale, however, 20% were in trouble of determining it. In case of VRS scale, 54% of respondents had troubles in determining pain on the scale, however, 46 % were not in trouble of determining it. Surveyed patients came to conclusion that, it was physical pain to have limited their functioning the most (73%), 22% were affected by psychical pain, however, only 5% indicated social limits. 64% claimed to be informed about type of painkiller, 20% were unable to recall such situation, while, 16% claimed, not to be provided with such information. According to interviewees, 56% of patients claimed, that pain had started to reduce within 15 minutes from applying painkiller, among 40% period of time extended to 30 minutes before the medicine started to bring intended results, while rest of respondents (2%) had waited 45 minutes and more. Having estimated pain influence on patients' life, it was found that, among 83%, day routines was disturbed by pain. Analyzing pain influence on patients' well-being, majority of questioned (57%), claimed that pain is accompanied by weakness, irritability (22%), lack of appetite (9%), vomit (7%). Other symptoms, were: tinnitus (3%), vertigo (2%), increased blood pressure (1%). Due to the analysis, 70% of patients obtain painkillers on doctors' prescription, 30% got medicines on their own request. On question, whether given dose of medicine was sufficient, the answers were: yes (85%) while 15% were dissatisfied with given dose. Almost half of patients (49%), claimed that, pain discomfort were reduced; among 39% pain disappeared, while, 12 % have not noticed any effect. Out of analysis results, there are other ways to fight pain off. Such methods, were as follows: bedding adjusting (35%), change of positioning (33%), commodities (25%). On question, whether patient was asked to apply a painkiller before improvement, change of bandage, gymnastics exercises, almost half of respondents (46%) answered, that they do not need such medicines. However, painkillers were given, before improvement, to 22% of interviewees; before gymnastics exercises to 19%; before change of bandage to 13% of patients. Another question concerned evaluation of hospital staff care in hospital wards. Almost everyone 90%, evaluated personnel positive, and are pleased with service they have received; 10% do not share such opinion. In the assessment, there was also checked state of knowledge of patients about pain, after education they have received, what is thought to be, one of main assumption of prevention. Majority of respondents (73%), knew the origin of pain. Almost half of patients (49%) were not acknowledged with any pain therapy program. Only 10% knew the exact use of pain evaluation scale. Medical staff have not educated patients, how to limit pain discomfort, according to 63%. Applied, by medical staff, methods to

minimize pain, were painkillers (4%), rehabilitation (5%) and diet (1%). As it turned out, 87% of respondents could not determine what scale was used to evaluate their pain intensity (figure 4).

Figure 4. Scales used for pain assessment



Discussion

According to American Medical Association (AMA), pain, should be treated as fifth life symptom and measured as other life parameters. In 1995, pain was assumed to be fifth life symptom which measure values recording, made it as objective data for doctors and nurses [5,6]. Sensitivity to pain is a individual feature. What influence on such sensitivity, are: sex, race, pain threshold, external factors, as well as, psychic that is significant in quality and quantity pain assessment. Feeling and determination of pain, is connected with personality differences, and may be modified by psychic features [7,8]. Pain assessment may be assimilated to the most significant skills of therapeutic team. It requires well structured knowledge, careful and accurate listening and observation, additionally, experience may be helpful in exact assessment. Evaluation cannot be a single event, it requires constant checking and pain information verification [9]. Clinical examinations prove, that pain lowers physical, vocational and social activity. Pain, left untreated, causes abnormal psychological and physiological reactions, what

may be a cause of complications. Such pain is a first reaction to a stress, which regardless of tissue injury, is affecting endocrine, cardiovascular and respiratory systems functioning, organs in ventral cavity, as well as metabolism. What is more, neurohormonal and metabolic systems react to pain, that trigger endogenous substances, which are determined as stress hormone. It influences negatively on automatic nervous system, which controls processes, that are maintaining homeostasis of organism and is as well, the cause of impulsive phenomenon [10].

Multidirectional pain treatment uses various techniques and medicines, that allow to maximize analgesic effect and to reduce any side effects. Choice of painkillers in pharmacological treatment, as far as severe and post-op pain is concerned, constitutes a great challenge in clinical practice, and recommendations concerning such treatment from 2011, pay attention at individualization of analgesic behavior and promotes multimodal therapy, that improves effectiveness of treatment and increases safety through limitation of painkillers side effects [11].

Multimodal analgesic is a dosing opioids, combined with non-opioid analgesics from anti-inflammatory NLPZ NSAID's group, Paracetamol, together with local anaesthetic. Combining various groups of medicines is justified in great effectiveness and limitation of potential side effects, thanks to dosage limitation and usage of synergistic activity. Dosage of painkillers, NLPZ and opioids is recommended for intravenous injection or with help of invasive techniques such as invasive local anaesthesia. It should be remembered that dosage of painkillers intramuscularly, cannot assure effective post-op analgesic due to probable dehydration (hypovolemia) and post-op hypothermia. In this case, absorption of medicines given in intramuscular or subcutaneous way is not sufficient for full analgesic. The aim of multidirectional pain treatment is to use all three classes of analgesics in initial period, when the pain is severe, in order to minimize dosage of each medicine and with it, side effects. When pain reduces, it is appropriate to set aside the strongest medicine and start taking medicine with less power instead, until pain disappears. The most significant thing, as far as pain treating is concerned, is to diagnose case through simple communication with patient and family, observation, analysis of documentation and interview concerning previously applied pain therapy [12].

Conclusions

1. Pain limits physical activity.

2. Five-stage scales included in the examination, were VAS and VRS which are sufficient in prophylaxis and pain alleviation but not entirely readable and understandable for all patients.
3. Patients' education has impact on awareness and abilities to evaluate a pain.
4. Medical staff did not familiarize patients with pain treatment program; patients do not know, whether they were acquainted with such program.
5. Majority of patients is pleased with medical care.

References

1. Wordliczek J, Dobrogowski J. Leczenie bólu. PZWL, Warszawa; 2012.
2. Misiołek H, Karpe J, Daszkiewicz A, Misiołek A. Obiektywizacja oceny bólu u dzieci i dorosłych. *Ból* 2013; 3:20-24.
3. Jocham HR, Dassen T, Widdershoven G, Halfens R. Evaluating palliative care – a review of the literature. *Palliat Care Res Treat* 2009; 3:5-12.
4. Kehlet H, Wilmore DW. Multimodal strategies to improve surgical outcome. *The American Journal of Surgery* 2002; 183: 630 – 641.
5. Koszewski W. Leczenie bólu w różnych schorzeniach. Wydawnictwa Medyczne Termedia, Poznań; 2009.
6. Lundh Hagelin C, Seiger A, Fürst CJ. Quality of life in terminal care – with special reference to age, gender and marital status. *Support Care Cancer* 2006; 14:320-328.
7. Czaplińska M. Ból choroba sama w sobie. *Magazyn Pielęgniarki i Położnej* 2010; 1(2):34-37.
8. Gaszyński W, Żaryski W, Gaszyński T. Współczesne metody farmakologicznego leczenia bólu pooperacyjnego. *Ordynator Leków* 2005; 11(12):49-50.
9. Watson MS, Lukas CF, Hoy AM, Back JN. Opieka paliatywna. Urban & Partner, Wrocław; 2005.
10. Paszkiewicz-Mes E. Rola pielęgniarki w leczeniu bólu po zabiegu operacyjnym. *Pielęgniarstwo XXI wieku* 2011; 4(37):37-39.
11. Wołowicka D. Anestezjologia i Intensywna Opieka. PZWL, Warszawa; 2008.
12. Bromley L, Bradner B. Ból ostry. MediPage, Warszawa; 2013.