



Self-Medication with Painkillers in the Municipality of Bačka Topola

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SUMMARY

Introduction: In Serbia, analgesics are available without a doctor’s prescription and using painkillers without previous consultation with a family physician has been ever more common among patients.

Aim: The aim of this study was to investigate the attitudes about self-medication for pain relief and characteristics of self-medication among patients in the municipality of Bačka Topola.

Subjects and Methods: The study was conducted between September 20, 2017 and September 29, 2017 in three General practice medical centres of the municipality of Bačka Topola. 136 adult patients, who agreed to fill in an anonymous questionnaire participated in the survey.

Results: 75% of the study subjects used painkillers during the last year. The most common indications were headache 52%, joint pain 33% and back pain. 41% of the subjects said they used painkillers once a month. The most commonly used pain reliever was ibuprofen 47% followed by diclofenac 28% and aspirin 21%. 48% of our subjects did not seek advice from their family physician (self-medication) because the pain was not too strong and did not last too long, while 32% of the subjects referred to earlier experience. 77% of subjects said they knew side effects of analgesics, but only 40% of them named it. 42% of subjects did not contact a family physician due to mild pain, 29% because of saving the time. 77% of subjects said that they are familiar with the side effects of analgesics, but only 40% could name them.

Conclusions: The results of our study point out that the patients’ knowledge about painkillers plays a very important role in their rational consumption. Therefore, educational campaigns about the behaviour of patients towards painkillers are the key elements to ensure quality and knowledge based use of these drugs among patients.

Keywords: nonsteroidal anti-inflammatory drugs, adverse reactions, irrational use of medicines

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INTRODUCTION

Pain is one of the most common medical symptoms and non-steroidal anti-inflammatory drugs (NSAIDs) are among the most commonly used medications [1]. The objective of pain elimination is to enable normal functioning of the patients in working and daily activities. Painkillers are the most effective way to eliminate and relieve pain. Pain, which is an uncomfortable feeling, may occur suddenly and for that reason we usually need to eliminate it quickly. In most cases we decide to take painkillers for pain relief without consulting a physician or pharmacist about the type of analgesic and its side effects. There are numerous reasons for self-medication [2]. Self-medication has many advantages – we can save time by avoiding making appointments and waiting for examinations at the doctor's office, we can avoid paying for examination and last but not least the pharmacies are more available than doctors. NSAIDs are the most commonly used painkillers [3]. In Serbia NSAIDs can be purchased without a prescription, and are widely used because of their anti-inflammatory, analgesic and antipyretic effects. However, nephrotoxicity remains a major concern with these drugs; other systems such as gastrointestinal, cardiovascular, hematologic, respiratory, and hepatic are also affected [4]. Responsibility remains with all healthcare professionals to establish the balance between the benefits and risks associated with these drugs. The patients who uses the drugs and the policy-framing bodies are others who could intervene in promoting the rational use of NSAIDs [5,6].

AIM

According to the above mentioned data, the aim of this study was to assess the attitudes about self-medication for pain relief and characteristics of self-medication among patients in the municipality of Bačka Topola.

SUBJECTS AND METHODS

The study was conducted in Bačka Topola municipality (which includes 23 local communities), with 33.321 inhabitants (according to the 2011 Census). The study sample included adult subjects who consulted general practitioners at any of three general practice medical centers in Bačka Topola (in local communities

Bačka Topola, Bajska and Panonija) between September 20, 2017 and September 29, 2017, and agreed to participate in the study. After giving their written informed consent, they were instructed by the researchers on how to complete the questionnaire. Patients who visited these clinics several times filled in the questionnaire only once. The study was approved by the Ethics Committee of the Faculty of Medicine in Novi Sad (approval number 01-39/64/1) and the Ethics Committee of the Health Center „Dr Hadži Janoš” in Bačka Topola (approval number 01-2051-2).

The total number of questionnaires which were distributed among the patients in the three health centers of the above mentioned institute was 160. The questionnaire used in the research was based on the questionnaire by Brlić and his colleagues which had been used in the earlier study [7].

The content, comprehensibility, readability and appearance of the questionnaire were previously tested on 30 adult subjects in Bačka Topola. According to the test samples we made some necessary changes in the questionnaires.

The subjects needed five or at least ten minutes to complete the questionnaire.

The questionnaire consisted of three separate parts. Firstly, it contained questions providing information about the patients' socio-demographic characteristics. Secondly, our goal was to collect data about: the leading health problems for which painkillers were used, which drugs were most commonly used and how frequently, the level of patients' knowledge about drug side effects, the intensity of pain for which analgesics is used and whether they read drug package inserts at all. Finally, we would also have found out whether the patients use alternative methods for pain relief.

The collected data from the questionnaires was statistically processed in Microsoft Excel 2007.

RESULTS

Out of 160 patients who received the questionnaire, 136 patients completed the entire questionnaire. The average age of patients was 50.06 ± 16.56 years.

75% of the patients reported taking

Table 1. Using analgesics in the past year

Have you used an analgesic last year?	n	%	Female	Male
Yes	110	80.8	75 (85%)	35 (73%)
No	26	19.1	13 (15%)	13 (27%)

analgesics during the last year. 85% of female and 73% of male subjects took medication to pain relief (Table 1.).

The study subjects were asked to assess the intensity of pain subjectively on a 1-7 scale according to the limit when they need to take a painkiller (Table 2.). On the scale 1 denotes the mild pain and 7 a very severe pain.

Among the study subjects, the average pain threshold was 5.27. Most of them, 41% took medication only in the case of very severe pain, and 1.5% of the respondents would never take the painkiller. 47% of female patients would take a painkiller in case of a very strong pain and 22% of the men would use medication for mild pain.

Table 2. Subjective assessment of pain intensity

1 (mild pain) - 7 (very severe pain)

	1	2	3	4	5	6	7
n	4	3	13	22	20	17	55
%	2.9	2.2	9.7	16.4	14.9	12.6	41
	1	2	3	4	5	6	7
Female	1 (1.1%)	1 (1.1%)	7 (7.9%)	12 (13.6%)	14 (15.9%)	10 (11.3%)	42 (47.7%)
Male	3 (6.2%)	2 (4.1%)	6 (12.5%)	10 (20.8%)	6 (12.5%)	7 (14.5%)	13 (27%)

64% of the patients visited doctors when feeling acute pain. It was enough to feel the pain for a few days. 29% of the patients asked for help from their physician after two weeks (Table 3.). Female patients turned to a doctor at least after a month, while 14% of male patients asked for help after a two weeks or a month.

In the study 34% of the subjects used a painkiller once a month. 29% used it once a year, 18% used it once a week, 10% used it every day and 9% had never used a painkiller (Table 4.). 45% of female subjects used an analgesic once a year and 35% used it once a week, while this ratio was lower among the male patients.

Table 3. The subjects' answers to the question: How long does the pain last before contacting a doctor?

How long does the pain last before you contact a doctor?	n	%	Female	Male
1 day - 1 week	88	64	57 (64.7%)	31 (64.5%)
2 weeks - 1 month	40	29	33 (37.5%)	7 (14.5%)
2 - 6 months	5	4	0	5 (10.4%)
More than a year	3	3	1 (1.1%)	2 (4.1%)
Other	0	0	0	0

Table 4. The subjects' answers to the question: How often do you use a painkiller?

How often do you use a painkiller?	n	%	Female	Male
Never	12	9	6 (6.8%)	6 (12.5%)
1/year	39	29	22 (45.8%)	17 (35.4%)
1/month	46	34	32 (36.3%)	14 (29.1%)
1/week	24	18	17 (35.4%)	7 (14.5%)
Daily	15	10	11 (12.5%)	4 (8.3%)

The most common indication for self-medication with analgesics was a headache (52%), even 56% of female respondents marked the headache as an indication. Our male subjects took painkillers mostly because of headache and articular pain (50%). Differences in the indications of menstrual discomforts were recorded, present exclusively in female population. Migraine as indicators for

self-medication was also recorded more often in female population. Sex differences in the indications for pain self-medication are shown in Table 5.

47% of the study subjects used ibuprofen most often for pain relief, 43.1% of the female and 37.58% of the male subjects (Table 6.). Among the male respondents the next most commonly used painkiller was diclofe-

	n	%	Female	Male
Headache	72	52	50 (56.8%)	24 (50%)
Articular pain	45	33	31 (35.2%)	24 (50%)
Back pain	56	41	36 (40.9%)	12 (25%)
Menstrual discomforts	16	12	16 (18.8%)	0
Sports injuries	6	4	4 (4.5%)	2 (4.1%)
Toothache	16	12	12 (13.6%)	2 (4.1%)
Migraine	4	3	4 (4.5%)	1 (2%)
Abdominal pain	7	5	7 (7.9%)	1 (2%)
Hangover	3	2	1 (2%)	2 (4.1%)

Table 5. Sex differences in the indications for pain self-medication

	n	%	Female	Male
ibuprofen	64	47	38 (43.18%)	18 (37.5%)
diclofenac	38	28	18 (20.4%)	14(29.1%)
acetylsalicylic acid	29	21	19 (21.5%)	10 (20.8%)
paracetamol	21	15	18 (20.4%)	4(8.1%)
Combination of paracetamol, propyphenazone, caffeine and codeine	6	4	4 (4.5%)	2 (4.1%)
phosphate sesquihydrate (Caffetin)	15	11	11 (12.5%)	4 (8.1%)
meloxicam	12	8	8 (9.09%)	4 (8.1%)
metamizole	8	6	8 (9.09%)	1 (2%)
nimesulid	3	2	4 (4.5%)	2 (4.1%)
naproksen	5	4	5 (5.6%)	0
ketoprofen	3	2	3 (3.4%)	0
trosipium chloride	2	1	2 (2.2%)	0

Table 6. Types of analgesics used by female and male subjects

iac (29% of them), while it came third among our female subjects (20% of them uses it). Female respondents used paracetamol more often than male respondents (20% and 8%, respectively).

64% of patients who practised self-medication did not ask their physician for advice, because they had heard about the medicine from their physician earlier, while 21%

claimed that they had used the painkillers for pain relief for years (Table 7.). Male respondents relied more on the advice of a friend or family member (22%) and previous experiences (27%), while most of the female respondents heard about the medicine from their doctors (68%) or pharmacist (13%).

For 38% of the study subjects these analgesics always help in pain relief, for 33%

	n	%	Female	Male
Doctor	87	64	60 (68.1%)	27 (56.2%)
Friend/Family member	24	18	13 (14.7%)	11 (22.9%)
Pharmacist	16	12	12 (13.6%)	4 (8.3%)
TV advertisement, newspaper, postere	4	3	4 (4.5%)	0
Internet	1	1	0	1 (2.3%)
"I've been using this medicine for years"	29	21	16 (18.1%)	13 (27%)

Table 7. The subjects' answer to the question: Where did you hear about this drug?

of them these medications often help, 21% of them claimed that they rarely help and 4% of them have never used any pain killers (Table 8.). The vast majority of our patients, 82%, take 1-2 tablets at the same time, 86% of them are female subject, while 25% of them are men re-

spondents who take more tablets. 11% of the patients often and 2% of them always take the maximum daily dose of the painkiller.

74.2% of the subjects read the instructions for use which is in the package, 77% of them are women and 68% are men (Table

Table 8. Characteristics of the use of painkillers

How often is this medicine used for pain relief?	n	%	Female	Male
Never	6	4	3 (3.42%)	3 (6.2%)
Rarely	30	21	18 (20.4%)	12 (25%)
Often	47	33	33 (37.5%)	14 (29.1%)
Always	53	38	35 (39.7%)	18 (37.5%)
What amount of painkillers are you taking?	n	%	Female	Male
1-2 tablets at once	112	82	76 (86.3%)	36 (75%)
1-2 tablets every 4 hours	13	11	10 (1.1%)	3 (6.2%)
More than 1-2 tablets every 4 hours	3	2	0 (0%)	3 (6.2%)
Other	7	5	2 (2.2%)	5 (10.4%)
How often do you take the maximum allowed dose?	n	%	Female	Male
Never	66	48	42 (47.7%)	24 (50%)
Rarely	52	39	34 (38.6%)	18 (37.5%)
Often	15	11	11 (12.5%)	4 (8%)
Always	3	2	2 (2.2%)	1 (2%)

Table 9. Knowledge about the side effects of painkillers

Do you read the instructions?	n	%	Female	Male
Yes	101	74.2	68 (77.2%)	33 (68.7%)
No	35	25.8	20 (22.8%)	15 (31.3%)
Do you know about the side effects of painkillers?	n	%	Female	Male
Yes	105	77.2	70 (79%)	35 (72%)
No	31	22.4	18 (21%)	13 (28%)

9.). 77.2% of respondents said they knew about the side effects of drugs, but only 40% could describe those side effects. Most of our

subjects have identified gastrointestinal problems such as nausea, abdominal pain, dyspepsia.

Table 10. Characteristics of the use of painkillers

Why do not you ask the doctor for advice?	n	%	Female	Male
The pain does not last long	65	48	41 (46.5%)	24 (50%)
The doctor is not available	12	9	8 (9%)	4 (8.3%)
Previous experience	44	32	34 (38.6%)	10 (20.8%)
Quick reduce	19	14	14 (29.1%)	5 (10.4%)
Friends'/family members' recommendation	3	2	1 (1.1%)	2 (4.1%)
Other	10	7	6 (6.8%)	4 (8.3%)
Why do you use self-medication?	n	%	Female	Male
Saving time	40	29	16 (18.1%)	24 (50%)
Poor pain	57	42	41 (46.5%)	16 (33.3%)
Speed	35	26	25 (28.4%)	10 (20.8%)
Gaining experience	8	6	7 (7.9%)	1 (20.8%)
Easy and safe	6	4	4 (4.5%)	2 (4.1%)
Crowd avoiding waiting	23	17	10 (11.3%)	13 (27%)
Why are you against self-medication?	n	%	Female	Male
Risk of side effects	61	45	40 (45.4%)	21 (43.7%)
Taking inappropriate medicine	23	17	16 (18.1%)	7 (14.5%)
Medication not taken properly	18	13	9 (10.2%)	7 (14.5%)
Risk of inadequate diagnosis	14	10	9 (10.2%)	5 (10.4%)
Development of addiction	15	11	11 (12.5%)	4 (8.3%)
Other	5	5	2 (2.2%)	3 (6.2%)

	n	%	Female	Male
Not safe at all	23	17	15 (17%)	8 (16.6%)
Partly safe	48	35	32 (36.3%)	16 (33.3%)
Both safe and unsafe	24	18	17 (19.3%)	7 (14.5%)
They're essentially safe	35	25	22 (25%)	13 (27%)
They're completely safe	4	3	1 (1.1%)	3 (6.2%)
Other	2	2	2 (2.3%)	0

Table 11. How safe are the drugs that you can buy without prescriptions?

66% of our subjects asked their physician/pharmacist for advice for pain relief. However, 48% did not ask for advice because the pain does not last for a long time and 32% refers to previous experiences. 42% of our patients chooses self-medication because of weak pain, 29% in order to save time and 26% to reduce the pain as fast as possible. 50% of the male subjects claimed that they use self medication to save time, 27% of them said that they want to avoid crowd and waiting in a row. 45% of the subjects was against self-medication due to the risks of side effects. 17% thought it was dangerous to use self-medication because in that way you could take inappropriate medicine, 13% was afraid of the risk of taking the medicine inadequately, 1% was afraid of the danger of addiction, while 10% was against self-medication because of setting up the risk

of inadequate diagnosis (Table 10.).

17% of patients thought that buying drugs without a medical prescription was not safe at all. 35% of them thought it was partly safe, while 25% considered buying drugs without prescriptions to be safe (Table 11.).

The study subjects also claimed that they use other non-pharmacological options to relieve pain (Table 12.). Taking rest was the most preferred option for 73% of the patients. It was followed by drinking herb tea (46.9%), massage (43.8%) and applying dressing over the affected part of the body (39.3%). The sex difference was recorded in the questions of massage, applying dressing over the affected part of the body, choosing physical activity and drinking tea for pain relief since these methods were preferred by female subjects.

	n	%	Female	Male
Rest	100	73	66 (75%)	34 (70.8%)
Heating pad	20	15	15 (17%)	5 (10.4%)
Massage	40	29	31 (35.2%)	8 (16.6%)
Dressing	23	17	18 (20.4%)	5 (10.4%)
Exercise	19	14	15 (17%)	4 (8.3%)
Herb tea	41	30	28 (31.8%)	8 (16.6%)
Cream	51	37	37 (42%)	15 (31.2%)
Visiting a chiropractic	7	5	6 (6.8%)	1 (2.08%)
Blockade	1	0.7	0	1 (2.08%)

Table 12. The most common alternative methods of pain relief

DISCUSSION

The results of the study show that self-medication with painkillers is very common among patients in the Municipality of Bačka Topola. Taking painkillers in the past year was confirmed by 75% of the study subjects. by 85% of the women and 73% of the men. Similar results were reported in Great Britain, which show that 73% of the study subjects took painkillers in the past month [8]. Likewise, other studies also showed a higher rate of self-medication was present among female subjects

[9,10,11]. Similarly, in the present study, 47% of female patients would take a painkiller for a very strong pain, while 22% of the men would use medication for mild pain.

Almost 50% of the study subjects used ibuprofen most frequently, 28% of them used diclofenac and 21% of them used acetylsalicylic acid. Based on a recent study in Vojvodina, diclofenac and ibuprofen are the most commonly used painkillers [12]. This research shows that male subjects use diclofenac at a

higher rate. The use of ibuprofen is the safest which is proved by the fact that it is the most commonly used NSAID in the European Union (Denmark, Norway, Finland) since ibuprofen is the least likely to cause gastrointestinal and cardiovascular side effects [13,14]. According to the results of this study, our male subjects used diclofenac more frequently, even though this NSAID has a detrimental effect on heart function. Therefore, in some countries of the European Union (Slovakia, Czech Republic, Hungary, Poland) the use of diclofenac was reduced. Ibuprofen was recommended instead [15,13]. One of the possible causes of this routine diclofenac utilization can be the more affordable price of this medicine. In Serbia, diclofenac can also be found in delayed release form (Retard), which means that you can take it once a day, while ibuprofen has been on the market in retard form only recently. This more convenient solution can also cause the frequent use of diclofenac.

Paracetamol is used by 15% of patients in the study. Paracetamol is one of the main causes of drug poisoning, while its high doses can cause adverse effects on liver function. A preventive strategy was defined in Great Britain to control the rate of paracetamol induced poisoning. For this purpose, the legislation was modified as to restrict the amount of tablets that can be bought without prescription. With this measure, the mortality rate caused by paracetamol or acetylsalicylic acid overdose was reduced by 22%, while the rate of admissions to departments of nephrology and liver transplantation because of hepatotoxic lesions which was caused by paracetamol decreased by 30% [16].

Headache was the most common indication for self-medication with painkillers, as it was claimed by 52% of the study subjects. It was followed by back pain (41%) and articular pain (33%). Headache has been identified as the predominant indication for medicinal treatment in many studies [8,17-20]. A study conducted in Iran showed that 68% of patients who suffered from headache had irregular sleeping habits, changing environment led to a stressful life and in addition, another predictive factor of headache was poor socio-economic status [21,22]. As self-medication for pain has also been encouraged by the WHO, an appropriate approach to the user will enable safer self-medication and making correct decisions on discomfort elimination

[23]. Thus, patients will assume an active part in taking care of their health and upgrade their quality of life.

This study shows that 74.2% of the subjects (77.2% of female and 68.7% of male subjects) reads package inserts. There were similar results in Croatia, where 76.6% of the participants in the research read the package inserts [7]. However, frequent and irregular use of drugs suggests that users are not properly informed, pointing to the need of improving the transfer of information to make self-medication safer, more appropriate and based on good knowledge [24].

The study of patient preferences for pain self-medication conducted in the USA revealed the non-pharmacological methods of pain relief were used by 68% of patients [25]. As many as 40% of them used exercise, 30% reported cooling/warming the body part involved, 22% used relaxation and 22% massage for pain relief. In the present study, the rate of subjects using massage for pain relief was similar (29%), whereas data on subjects using exercise and dressings over the affected parts of the body differed considerably (14% and 17%, respectively).

Despite analgesics being easily available to the people, they can have numerous side effects. Although 77.2% of the subjects answered „yes” to the question if they were aware of the side effects of painkillers, only 40% could describe their characteristics. Therefore it should be suggested that self-medication of painkillers cannot be considered completely safe. These results are the key to disseminating health knowledge. At this point should be underlined that the need for advice about possible side effects of medicines should be the essential part of communication with the patients. In addition, when talking about self-medication, the pharmacist's advisory role is extremely important, as self-medication is usually done without physician advice. Besides, since painkillers in Serbia can be purchased without a medical prescription, pharmacists are the last link to patients before analgesics use [25,26].

CONCLUSION

Based on the results, self-medication and the use of painkillers are present among patients in the Municipality of Bačka Topola. However, self-medication is not without risks,

largely due to inappropriate administration of medication.. The surveyed sample revealed many shortcomings regarding the attitudes and knowledge associated with analgesics use. Raising the level of medical knowledge and patients' awareness is an essential factor of proper self-medication. Pharmacists hold key position for monitoring the safe and effective use of painkillers through advice and counselling.

ACKNOWLEDGEMENTS

This work was supported by the Ministry of Science and Technological Development, Republic of Serbia (project No.41012). Tinde Halgato express one's thanks to Collegium Talentum 2018 Programme for support.

CONFLICTS OF INTEREST

The authors state that they have no conflict of interest.

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Samomedikacija pacijenata analgeticima u opštini Bačka Topola

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KRATAK SADRŽAJ

Uvod: U Srbiji analgetici su dostupni bez lekarskog recepta, pa pacijenti sve češće koriste lekove za smanjenje bolova bez konsultacije lekara.

Cilj: Svrha ovog rada je da se utvrde stavovi pacijenata o samomedikaciji analgeticima i karakteristike same samomedikacije među pacijentima u Opštini Bačka Topola.

Metodologija: Istraživanje je sprovedeno u periodu od 20-29.09.2017. u tri ambulante Doma zdravlja u opštini Bačka Topola. Ukupno 136 pacijenata, koji su popunili anketni upitnik, je učestvovalo u ispitivanju.

Rezultati: 75% ispitanika je koristilo analgetik u toku prethodne godine, a 34% jednom mesečno. Najčešće indikacije bile su: glavobolja 52%, bolovi u zglobovima 33% i bolovi u krstima 41%. Najčešće su korišćeni ibuprofen 47%, diklofenak 28% i acetilsalicilna kiselina 21%. Čak 48% ispitanika je izjavilo da je koristilo analgetike bez prethodne konsultacije lekara (samomedikacija), jer bol nije bio dovoljno jak i nije trajao dugo, a na osnovu prethodnog iskustva analgetike je koristilo njih 32%. Pacijenti nisu posetili lekara jer je bol nije bio jak u 42% slučajeva, a zbog ušteda vremena u 29%. 77% ispitanika je tvrdilo da je upoznato sa neželjenim dejstvima analgetika, ali samo 40% njih ih je znalo nabrojati.

Zaključak: Rezultati našeg istraživanja ukazuju da znanje pacijenata o analgeticima ima veoma važnu ulogu u njihovoj racionalnoj primeni. Stoga su edukativne kampanje o ponašanju pacijenata prema analgeticima ključni elementi kvalitetne i svesne medikacija koja se temelji na znanju.

Ključne reči: nesterodni antiinflamatorni lekovi, neželjena dejstva, neracionalna upotreba lekova

Received: May 15, 2019

Accepted: June 13, 2019