ORIGINAL ARTICLE

Use of selected OTC drugs: comparing Greece and the Czech Republic

Užívání vybraných OTC přípravků: srovnání Řecko a Česká republika

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Summary

The use of OTC (over-the-counter) drugs containing Ibuprofen and Paracetamol in solid peroral dosage forms was researched. The questionnaire was distributed in 6 pharmacies in Athens, pharmacists interviewed the patients and recorded the answers from June to August 2014. Data from 50 patients for each substance were gathered and analyzed. The most of purchasers of Paracetamol bought it repeatedly (70.00% of respondents); Ibuprofen was preferred to be used in treating headache (81.82% of repeated users, 35.29% of the first time users), and both of the researched drugs were used with almost equal frequency in treating toothache and muscle and joint pain. Ibuprofen is used to treat a wider range of symptoms than Paracetamol. People buying Paracetamol for the first time assume that it is free of side effects (73.33%) and people using it repeatedly did not observe any side effects (88.57%). The results were compared with the same research performed in the Czech Republic several years ago. Differences were detected in expecting side effects of Paracetamol (26.67% in Greece, 54.84% in the CR) and in using Ibuprofen to treat muscle and joint pain (17.65% in Greece, 47.60% in the CR).
Key words: self-medication • paracetamol • ibuprofen • Greece

Souhrn

Předmětem práce bylo užívání OTC (volně prodejných léčiv) s obsahem ibuprofenu a paracetamolu v pevných perorálních lékových formách. Dotazník byl distribuován v šesti lékárnách v Aténách, farmaceuti se dotazovali pacientů a zaznamenávali odpovědi od června do srpna 2014. Data od 50 pacientů pro každou substanci byla shromážděna a analyzována. Většina pacientů kupujících paracetamol, jej kupovala opakovaně (70,00 % respondentů), ibuprofen byl upřednostňován pro léčbu bolesti hlavy (81,82 % opakovaných uživatelů a 35,29 % nových uživatelů), obě zkoumaná léčiva byla užívána téměř shodně často pro léčbu bolestí zubů a bolestí svalů a kloubů. Ibuprofen byl užíván k mírnění širšího spektra příznaků než paracetamol. Ti, kteří kupovali přípravky s obsahem paracetamolu poprvé, se domnívají, že nemají vedlejší účinky (73,33 %) a opakovaní uživatelé udávají, že žádné vedlejší účinky nepozorovali (88,57 %). Výsledky byly porovnány se stejnou studií provedenou dříve v České republice. Rozdíly byly nalezeny v očekávání vedlejších účinků paracetamolu (26,67 % v Řecku, 54,84 % v ČR) a v užití ibuprofenu pro léčení bolestí svalů a kloubů (17,65 % v Řecku, 47,60 % v ČR).
Klíčová slova: samoléčení • paracetamol • ibuprofen • Řecko

Introduction

Self-care is becoming increasingly popular among health care consumers. Self-medication is the tendency of humans to use a substance for self-treatment of physical or psychological ailments, which are usually not diagnosed by a specialist. In simple words, it is the use of drugs to treat self-diagnosed disorders or symptoms[1]. Over-the-counter drugs (OTC) are pharmaceutical products which the consumer can obtain from a pharmacy without a doctor's prescription. The OTC drugs are used for mild diseases of which the symptoms are recognized easily by the patient. Several drugs, after the appropriate preclinical and clinical documentation, can be changed from the status "prescription-only" to OTC drugs. In order to be reclassified, the product should meet certain criteria, e.g. the reason for which the product is to be used as an OTC should be the same with the prescription indication and easy to be diagnosed by the patient, the drug should have favourable adverse-event and drug-interaction profiles, relatively low

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toxicity and a low potential for abuse. Finally, the drug should have a wide therapeutic spectrum and should be used easily without supervision. Patient education and counselling are particularly important to promote safe and effective use of over-the-counter products[2].

In order to make a proper decision, the pharmacist should first listen and then question the patient. Firstly, listening and evaluating the patient's symptoms or problems is very important to understand the situation. If there is a long duration of symptoms, recurring or worsening problems, severe pain, failed medication or suspected adverse drug reactions, the pharmacist should refer the patient to a specialist. If there is not any serious problem, the pharmacist can advise the patient for the most suitable treatment[3, 4].

In Germany in 2011, drug-related problems in 17.6% of all self-medication cases were documented; 29.7% of these cases were due to inappropriate self-medication, 20.5% were due to the inappropriate requested product, 17.1% because the intended duration of drug use was too high including abuse, and the 6.8% was caused by wrong dosage[5].

A survey designed in 2009 in Italy has shown that the most widely used non-prescription drugs were NSAIDs and paracetamol. A remarkable fact is that 55.3% of patients referred to have taken at least one prescription drug such as hypertensives or cardiovascular medicines at the same time when they have been taking non-prescription drugs. Mostly, the pharmacists were not aware of this fact[6].

Another study in Poland in 2012 was held to define situations in which patients ask a pharmacist for advice about the treatment of a disease. When buying an OTC drug, respondents ask the pharmacist seldom (19.8%) or never (8.9%). When having minor complaints, patients seek the advice of the pharmacist seldom (26.7%) or never (16.8%). The patients visiting a pharmacy to consult the pharmacist were mainly interested in the proper choice of OTC medicines[7].

Experimental part

Methodology

The same questionnaire as in the Czech studies[8, 9] was used. The respondents were chosen randomly from the patients coming to the pharmacy to buy an OTC drug containing paracetamol or ibuprofen in solid peroral dosage forms. Before starting the questioning, patients who buy the drug for any other person (not for themselves), were excluded from the study because they are not competent to tell the researcher the facts that should be investigated by means of the questionnaire. The research was performed in 6 pharmacies in Athens, pharmacists interviewed the patients and recorded the answers from June to August 2014, so long till 50 questionnaires about paracetamol and 50 about ibuprofen were completed. Microsoft Excel was used to analyze the data.

Results

Table 1. The ratio of first and repeated use of researched drugs

Use	Paracetamol		Ibuprofen	
	n	%	n	%
First time	15	30.00	17	34.00
Repeated	35	70.00	33	66.00
Together	50		50	

Table 2. The list of symptoms that are treated with researched drugs (Patients can check all symptoms they used/intended to treat with the drug)

Symptoms	Paracetamol				Ibuprofen			
	Repeated use		First use		Repeated use		First use	
	n	%	n	%	n	%	n	%
Headache	26	74.29	5	33.33	27	81.82	6	35.29
Muscle & joint disorders	12	34.29	3	20.00	13	39.39	3	17.65
Toothache	6	17.14	2	13.33	6	18.18	4	23.53
Menstrual pain	19	54.29	2	13.33	23	69.70	11	64.71
Flu-like infections	23	65.71	10	66.66	24	72.73	8	47.06
Other	0	0	0	0	2	6.06	0	0

Table 3. Side effects of researched drugs

	Paracetamol		Ibuprofen	
First time users – expectation				
	n	%*	n	%*
Drug may have side effects	4	26.67	6	35.29
Drug will not have any side effects	11	73.33	11	64.71
Repeated users – experience				
	n	%*	n	%*
Drug had some side effects	4	11.42	5	15.15
Drug did not have any side effects	31	88.57	28	84.85

*The percentage is determined according to the number of respondents for each use.

Table 4. Recommendation to buy the drug – first time users

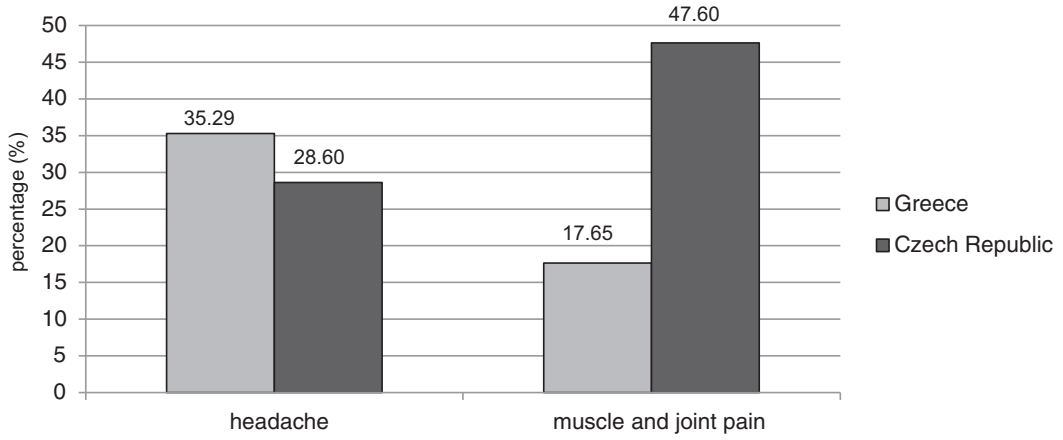
	Paracetamol		Ibuprofen	
	n	%*	n	%*
Physician	2	13.33	4	23.53
Pharmacist	7	46.67	10	58.82
Family, relatives, friends	4	26.67	2	11.76
Advertisement	2	13.33	1	5.88

*The percentage is determined according to the number of first time users for each drug.

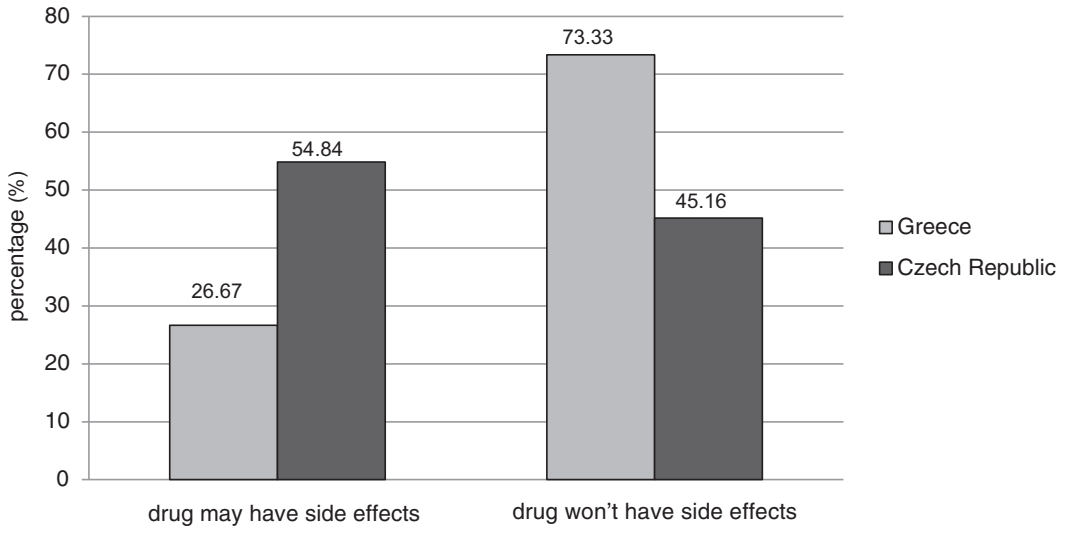
Table 5. Contemporary use of any drug prescribed by the doctor with an OTC drug containing paracetamol or ibuprofen

Contemporary use of any prescribed drug and an OTC drug containing paracetamol or ibuprofen	Paracetamol				Ibuprofen			
	Repeated use		First use		Repeated use		First use	
	n	%	n	%	n	%	n	%
no	30	85.71	8	53.33	22	66.66	13	76.47
yes	5	14.29	7	46.67	11	33.33	4	23.53
the physician is informed	3	60.00*	2	28.57*	5	45.45*	1	25.00*
the physician is not informed	2	40.00*	5	71.43*	6	54.55*	3	75.00*

*The percentage is determined according to the number of respondents indicating contemporary use of a prescribed and an OTC drug.



Graph 1. Reasons for using ibuprofen by the first time users in the Czech Republic[9]) and Greece



Graph 2. Expectation of side effects from the first time users of paracetamol in the Czech Republic[8]) and Greece

Discussion

The results show that the OTC drugs containing ibuprofen and paracetamol are used by most patients in Greece repeatedly (70.00%, resp. 66.00%) (Table 1). The situation in the Czech Republic does not differ substantially – the percentage of repeated users of ibuprofen as an OTC drug is 86.50%[9)] and those of paracetamol as an OTC drug is 81.55%[8)]. Ibuprofen is preferred to be used in treating headache (81.82% of repeated users, 35.29% of the first time users) (Table 2), both of the researched drugs are used with almost equal frequency by repeated users in Greece in treating toothache (18.18% ibuprofen, 17.14% paracetamol) (Table 2) and muscle and joint pain (39.39% ibuprofen, 34.29% paracetamol) (Table 2). The difference in using ibuprofen by the first time users is evident: fewer Greek patients (17.65%) use it to treat muscle and joints pain than the Czech ones (47.60%) (Graph 1). On the contrary, ibuprofen is used more frequently by the Greek first time users in treating headache (35.29%) than by the Czech ones (28.60%) (Graph 1). Ibuprofen is used to treat a wider range of symptoms than paracetamol in Greece (Table 2). As for the side effects expected by first time users in Greece: ibuprofen 35.29%, paracetamol 26.67% (Table 3, Graph 2), comparing to the Czech first time users: ibuprofen 54.76%[9)], paracetamol 54.84%[8)] (Table 3, Graph 2). Pharmacists seem to have an important role in recommending OTC drugs to the first time users in Greece (ibuprofen 58.82%, paracetamol 46.67%) (Table 4); the recommendation of the family, relatives and friends is the main reason to choose the drug for Czech first time users: ibuprofen (52.38%)[9)] and paracetamol (58.06%)[8)]. When comparing informing the physician about the contemporary treatment with a prescribed drug and an OTC drug by repeated users, Greek patients are less aware of doing it (ibuprofen 54.55% and paracetamol 40.00% do not inform the physician) (Table 5), the Czech patients' score for not informing the physician is 25.00% for Ibuprofen[9)] and 22.22% for paracetamol[8)]. Identically with the experience from other countries[5–7)] including the CR[8, 9)], the results point out the importance of counseling patients to help them to choose OTC drugs for safe self-medication.

Conflicts of interests: none.

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