

STUDY ON SELF-MEDICATION: NONSTEROIDAL ANTI-INFLAMMATORY DRUGS

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Abstract

Over the counter OTC medication is an important part of self-medication in Romania. Romanians choose to treat themselves for cold, headache, toothache, cough and sore throat. The most frequently drugs used without a prescription are vitamins and food supplements, cough and fever pills, analgesics and antibiotics.

Metamizole is an analgesic of first choice for most Romanian suffering from acute or chronic pain. Due to its side effect (risk of agranulocytosis), metamizole was removed from therapy in many countries: USA, Japan, Australia, most European Union countries while in other countries (Mexico, India, Brasil, Russia, etc) may still be available without any prescription. In Romania, metamizole was removed from the OTC list in April 2011.

In order to document metamizole self-medicating behaviour, a total of 100 questionnaires were distributed to people between the ages of 30 and 40 years. Most of people who answered the questionnaire are living in urban area of Oradea and Baia Mare. The questionnaire's purpose was to highlight the Romanians attitude on this substance, widely discussed in the media after removal of the pharmaceutical products containing metamizole from the OTC list.

Key words: over the counter medicines OTC, self-medication, metamizole, questionnaire.

INTRODUCTION

According to WHO, self-care is a broad concept encompassing elements such as hygiene, nutrition, self-medication, lifestyle, socio economic factors, environmental factors. As a component of self-care, self-medication refers only to the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. Self-medication includes the use of non-prescription drugs and different alternative medicines such as herbal and traditional products or food supplements. Non-prescription drugs often called “over the counter” (OTC) refer to medicines which are approved and available without a doctor’s prescription through pharmacies and which are safe and effective when are used in therapy (<http://apps.who.int/medicine>; Pankaj J. et al., 2012).

Self-medication is becoming an increasingly area within healthcare. It moves patients towards greater independence in making decisions about management of minor illnesses and it increases access to medication while minimising health care costs (Hughes C.M. et al., 2001). In most cases, self-medication is the first option for many patients and thus self-medication became a common practice worldwide. About 60-80% of health problems

are treated by self-medication (Pankaj J. et al., 2012; Awad A.I. et al., 2007; Banerjee I. et al., 2012; Sihvo S. et al., 2000; Roulet L. et al., 2012; Eickhoff C. et al., 2011; Angus D.E. et al., 1998; Batty G.M. et al., 1997).

In order to use a non-prescription drug safely and with good results, the patients need many information such as: to accurately recognize symptoms, set therapeutic objectives, select the appropriate medicine to be used for their medical condition, determine the appropriate dosage and dosage schedule taking into account their medical history, contraindications, concomitant diseases and concurrent medications and possible side effects of the medicine (WHO, 2000; Auta A. et al., 2012). While in case of medical prescription all these information are provided by the treating physician, in the case of self-medication they come from the labeling material, patient information texts, patient's previous personal experience, mass-media and product's advertising (WHO, 2000).

However, self-medication is associated with a significant risk of drug-related problems such as misdiagnosis, use of excessive drug dosage, prolonged duration of use, drug-drug interactions, adverse drug reactions meaning that the patient assumes a great responsibility using a pharmaceutical product which is available without a medical prescription. The process may be supported by advices and counseling from a healthcare professional, in many cases, a community pharmacist. Thus, pharmacists can play a key role in helping people to make informed self-medication choices (Hughes C.M. et al., 2001; <http://apps.who.int/>; WHO, 2000).

The statistical studies show that people of all socio-demographic categories practice self-medication. The most frequently self-diagnosed illnesses and the main categories of drugs used in self-medication varies from one country to another. However, self-medication can include all medication classes, particularly drugs acting on the respiratory system (fever, cough and common cold – antipyretics, analgesics, cough suppressant, antibiotics), gastrointestinal tract (diarrhea, pain abdomen due to peptic ulcer – antidiarrhea agents, antiulcer agents), nervous system (headache – analgesics), and skin. Multivitamin preparations are frequently used in all countries and requests for antimicrobial drugs (antimalarials, anti helminthics) vary from one country to another (Pankaj J. et al., 2012; Auta A. et al., 2012; Banerjee I. et al., 2012; Du Y. et al., 2009).

Self-medication is also highly prevalent in Romania. Romanians choose to treat themselves for cold, headache, toothache, cough and sore throat. The most frequently drugs used without a prescription are vitamins and food supplements, cough and fever pills, analgesics and antibiotics. Many parents have given drugs to their children without any medical advice (www.romaniatv.net).

MATERIAL AND METHOD

Metamizolum natriicum is used as an analgesic of first choice by most Romanian suffering from acute or chronic pain. Due to its side effect (risk of agranulocytosis), metamizole was removed from therapy in many countries: USA, Japan, Australia and most European Union countries while in other countries (Mexico, India, Brasil, Russia, etc.) may still be available without any prescription.

In order to document metamizole self-medicating behaviour, a questionnaire was developed between April and May 2011. It is worth to note that the questionnaire was not applied in pharmacies and hospitals where there is large opportunity to meet patients who practice self-medication. A total of 100 questionnaires were distributed to people between the ages of 30 and 40 years. Most of people who answered the questionnaire are living in urban area of Oradea and Baia Mare. The questionnaire's purpose was to highlight the Romanians attitude on this substance, widely discussed in the media after removal of the pharmaceutical products containing metamizole from the OTC list (Flore S.E., 2011).

RESULTS AND DISCUSSION

For a good screening on the patients' information level concerning metamizol, questionnaire include a total of 12 questions, each question having several possible answers (Flore S.E., 2011).

1. Source of information. Drug users were asked to mention their source of information for self-medication. The results revealed that 71% obtained advice from healthcare providers such as physicians and pharmacists but without formal prescription and 17% of drug consumers were advised by family and friends who have no health background, while 12% of them have not received any advice claiming that they know the drugs they need (Table 1).

Table 1

Q1. To whom you ask when you do not feel good?

SOURCES OF INFORMATION FOR SELF-MEDICATION	PERCENTAGE (%)
Recommended by physicians and pharmacists without prescription	71%
Advised by family and friends	17%
Received no information	12%

2. *Frequency of self-medication.* Drug users were asked to mention the frequency of self-medication for pain. About 36% take pain killers every time they have pain, while 64% of them choose to wait to pass the pain without taking drugs (Table 2).

Table 2

Q2. Do you take medication as soon as you feel pain or choose to pass without pain medication?

FREQUENCY OF SELF-MEDICATION	PERCENTAGE (%)
Yes – take medication every time	36%
No – wait to pass the pain without taking drugs	64%

3. *Frequency of self-information.* The next assessment made on drug consumers was the frequency of reading the patient information text that accompanies the medication. 69% of those surveyed read it every time before taking a self-administered drug, 9% read it sometimes, while 22% do not read it (Table 3).

Table 3

Q3. Do you read the patient information texts?

FREQUENCY OF SELF-INFORMATION	PERCENTAGE (%)
Yes – read it every time	69%
No – do not read it at all	22%
Sometimes	9%

4. *Source of information on drug side effects.* Drug consumers were asked to mention their source of information on drug side effects.

Table 4

Q4. How do you find out the side effects of drugs?

SOURCES OF INFORMATION ON DRUG SIDE EFFECTS	PERCENTAGE (%)
Read patient information text	56%
Advised by physicians	15%
Advised by pharmacists	13%
Read websites information	9%
Advised by friends	7%

The results revealed that 56% of them read patient information text that accompanies the medication, 28% were informed by healthcare providers such as physicians (15%) and pharmacists (13%), 9% read online information on different websites and 7% were informed by friends (Table 4).

5. *The specific name of the drug.* Do drug consumers use products containing metamizole? How do drug consumers request pharmaceutical products containing metamizole from the community pharmacies for self-medication? In order to help, the questionnaire authors asked drug consumers to mark out the specific name of drug products they use: Algotop, Algoblock, Algocalmin, Algoremin, Algozone, Alindor, Centralgin, Fabocalm, Metamizol Farmacom, Metamizol Solacium, Novocalmin, Piafen, Quarelin, Sintocalmin. Accordingly, 78% of the drug consumers used pharmaceutical products containing metamizol. 48% of them requested the very known Algocalmin, 17% asked Piafen, followed by Algozone and Novocalmin in 12% and 11.5%, respectively. The other products were requested in smaller amounts (Table 5).

Table 5

Q5. In order to kill the pain, do you take any of the products listed bellow? If so, please mark out the products you use.

THE SPECIFIC NAME OF THE DRUG	PERCENTAGE (%)
Yes – take at least one product containing metamizole	78%
No – do not take	22%
Algocalmin	48%
Piafen	17%
Algozone	12%
Novocalmin	11.5%
Quarelin	7.5%
Algoremin	4%

6. *Frequency of self-medication with metamizole.* Drug users were asked to mention the frequency of pain self-medication with metamizole. About 86% take metamizole very rarely, 6% take it weekly, 4% take it daily several times a day, while 4% take one tablet every day (Table 6).

Table 6

Q6. How often do you manage the pain with one of the medicines listed above?

FREQUENCY OF SELF-MEDICATION WITH METAMIZOLE	PERCENTAGE (%)
very rarely	86%
weekly	6%
daily several times a day	4%
one tablet every day	4%

7. *Source of information on self-medication with metamizole.* Drug users were asked to mention their source of information on medicines with metamizole. About 66% take metamizole products at the direction of health care providers such as pharmacists (36%) and physicians (30%), 26% have not received any advice claiming that they know this drug is good for them, and 8% of drug consumers were advised by family and friends (Table 7).

Table 7

Q7. If you use one/more than one of the medicines listed above, who recommended them to you?

SOURCES OF INFORMATION ON SELF-MEDICATION WITH METAMIZOLE	PERCENTAGE (%)
Recommended by pharmacists	36%
Recommended by family-doctor	30%
Received no information, patients know the drug is good for them	26%
Advised by family and friends	8%

8. *Knowledge on metamizole products withdrawn from OTC list.* Drug users were asked to mention their knowledge about the possibility to purchase metamizole products only with formal prescription starting from 1.04.2011. 70% of respondents knew this new regulation and only 30% had no knowledge about it (Table 8).

Table 8

Q8. Did you know that all drugs listed above can be purchased from pharmacies only on prescription starting from 1.04.2011?

KNOWLEDGE ON METAMIZOLE PRODUCTS WITHDRAWN FROM OTC LIST	PERCENTAGE (%)
Yes, I knew it	70%
No, I did not know	30%

9. *Reasons for purchasing the metamizole products on medical prescription.* Drug users were asked to mention their knowledge about the reasons why metamizole products can be issued only on medical prescription. 53% of respondents knew the reasons and 47% had no knowledge about it (Table 9).

Table 9

Q9. Do you know the reasons why the National Agency of Medicines has determined that these drugs to be dispensed only on prescription from the doctor?

REASONS FOR PURCHASING THE METAMIZOLE PRODUCTS ON MEDICAL PRESCRIPTION	PERCENTAGE (%)
Yes, I know it	53%
No, I do not know	47%

10. *The psychological effect on patients of metamizole release by medical prescription.* Are drug consumers content with this new regulation? How did drug consumers react to this new drug regulation? Analysis of interviewee showed that 62% are satisfied trusting the doctor recommendation, 22% are not satisfied because they know the medicines they need and 16% are not satisfied trusting the pharmacist recommendation (Table 10).

Table 10

Q10. Are you satisfied that, starting from 1.04.2011, you can get these drugs only if your doctor recommends them by medical prescription?

THE PSYCHOLOGICAL EFFECT ON PATIENTS OF METAMIZOLE RELEASE BY MEDICAL PRESCRIPTION	PERCENTAGE (%)
Yes, the doctor knows if I need the drug	62%
No, I know the drug I need and I do not have to go to doctor	22%
No, the pharmacist knows if I need the drug and I do not have to go to doctor	16%

11. *Knowledge on metamizole side effects.* Drug users were asked to mention their knowledge about the side effects of metamizole. The results revealed that 47% of respondents have enough knowledge but 53% have not any knowledge about the undesirable side effects of metamizole (Table 11).

Table 11

Q11. The drugs listed above contain metamizole. Do you know the side effects of metamizole?

KNOWLEDGE ON METAMIZOLE SIDE EFFECTS	PERCENTAGE (%)
Yes, I know it	47%
No, I do not know	53%

12. *Socio-demographic characteristics of respondents – age and gender.* Upon categorization of respondents, age category showed that 26% of the drug users were 25 years of age and below, 25% were between the ages of 25-35 years, 14% were between the ages of 35-45 years and 35% were 45 years and above. The proportion of the interviewee in terms of gender was 65% female and 35% male (Table 12).

Table 12

Q12. Please indicate your age and gender.

SOCIO-DEMOGRAPHIC CHARACTERISTICS. AGE AND GENDER.	PERCENTAGE (%)
Less than 25	26%
25 to 35	25%
35 to 45	14%
Over 45	35%
Female	65%
Male	35%

CONCLUSIONS

Compared with Fraser's observations in 1999 that only 1 of 4 patients ask the doctor about their symptoms (Cristea A.N., 2006), the survey shows that today the addressability to the doctor is much increased. However, it is still low the number of patients who ask doctors advice recalling that the questionnaire was applied in urban area. A larger study that would include the rural areas of Romania would make the percentage much lower knowing that rural population in Romania may experience real problems in seeing their family doctors.

Taking into account the answers for the questions 3, 4 and 9 we can conclude that patients are interested in medications but only few of them get information from the doctor and pharmacist. This shows the need for greater involvement of pharmacist in patients information on the medicines they are issued.

The survey results reveal also that the most common form of metamizole is Algocalmin trade. However, most respondents rarely use this analgesic and this is a very gratifying result thinking that cronic consumption can lead to immunosuppression.

Patients use metamizole recommended by pharmacists (36%) and then by physicians (30%). This result is not surprising since metamizole was OTC medicine until March 2011. However, taking into account its side effects which may evolve so dramatically (risk of agranulocytosis, hypersensitivity), it is necessary to take all precautions when administering this drug. Moreover, the population with hypersensitivity (allergy) is increasing and the population's risk of suffering hypersensitivity to metamizole is directly proportional. Thus, the very good knowledge of the patient's history and treatment to prevent the onset of allergic reactions is imperative.

The last part of questionnaire shows that patients have information about the National Agency of Medicine (NAM) decision to remove metamizole from OTC list. This is due to media which has generated much discussion and comments. Many patients (62%) are content about this new regulation trusting the doctor recommendation but not some of them (22%) who take drugs on their own. Pharmacists can play a key role for the last category.

In accordance with NAM, in Romania were no reports of serious side effects to metamizol. Thus, the decision taken by the NMA is only for prevention and reduction of excessive consumption of this product (Flore S.E., 2011).

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