

Level of knowledge of the compositions of analgesic medication containing aspirin

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Keywords

Drugs, generic. Aspirin. Knowledge, attitudes, practice.

Abstract

Objective

To evaluate the knowledge of the generic designation, use and composition of analgesic medications containing aspirin.

Methods

A total of 124 interviews were carried out between December 1999 and January 2000, in two neighborhoods of the city of Porto Alegre, southern Brazil. The interview was held with the person who came to answer the door at each of the homes that was drawn. The data collection instruments comprised a set of five different pharmaceutical specialties containing acetylsalicylic acid, and an interview consisting of two open questions concerning the differences and similarities between the products.

Results

Three major knowledge-level groups were characterized on the basis of the information that the interviewees were able to provide. The group that was knowledgeable about the matter comprised 14 individuals (11%). The group with limited knowledge contained 61 people (49%). Those who had no knowledge of the matter at all formed a group of 49 people (40%).

Conclusions

Taking the results as a whole, they indicate that most people (about 90% of the sample investigated) are simply not aware of what the active substance is, even in pharmaceutical specialties that they use frequently.

INTRODUCTION

Medications play a central role in the healthcare practices of modern society, such that the majority of therapeutic interventions involve the utilization of at least one medication. Consequently, it can be stated that medications are present in all homes, considering that treatment is generally not exclusively performed within the domains of hospitals, outpatient services and medical consultation offices.

Among medications, analgesics certainly form one of the most widely used groups, because they are uti-

lized in pain relief and are easy to obtain. Some analgesics are freely sold over the counter. They are prominently available outside of pharmaceutical establishments, such as in bars, warehouses and grocery stores,⁸ thereby going against the legal regulations. People are also systematically induced to use them, through advertising in the mass communication media, especially radio and television.⁵ In this context, it is unsurprising that Brazilian studies on self-medication, performed in the cities of Fortaleza (Ceara),¹ Belo Horizonte (Minas Gerais)⁴ and Santa Maria (Rio Grande do Sul),⁹ have indicated the predominance of analgesics among the most utilized drugs.

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In Brazil, medications are the main agents capable of causing poisoning in human beings. Data from the National System for Toxicopharmacological Information (*Sistema Nacional de Informações Toxicofarmacológicas* - SINITOX) show that 28.5% of the cases of poisoning registered are due to drug utilization.²

In addition to the impact of medications in terms of poisoning, it needs to be stressed that there is a lack of data on other events resulting from inappropriate use of medications, such as occurrences of adverse reactions and questionable treatment effectiveness that are possibly caused by a lack of knowledge among patients regarding their medications.

Informing the public is one of the ways of minimizing the risks relating to poisoning and the occurrence of adverse reactions. The present work was developed with the objective of assessing what knowledge people have of the composition of analgesic medications containing acetylsalicylic acid (aspirin). This drug was chosen as the study instrument because of its high prevalence on the market and widespread utilization, even in situations in which it is not considered to be the recommended analgesic.⁷

METHODS

Interviews were held with 124 people living in a district of Porto Alegre, State of Rio Grande do Sul, between December 1999 and January 2000. Two units of the coverage zone of the community healthcare service were located in this district. The interview was held with the person who came to answer the door at each of the homes drawn. One person refused to answer the questionnaire, corresponding to 0.8% of the sample.

In pretesting performed during the development of the data collection instrument, attempts were made to ascertain what knowledge people have of the four analgesics that are sold in Brazil without needing a prescription: acetylsalicylic acid (aspirin), dipyron (metamizole), paracetamol (acetaminophen) and ibuprofen. The results obtained from this set of medications furnished a picture that was difficult to interpret. For this reason, the final investigation was performed on only one analgesic, namely acetylsalicylic acid.

The data collection instruments consisted of a set of five packs of pharmaceutical specialties containing acetylsalicylic acid (three containing 500 mg, one of 650 mg and one of 500 mg that was a buffered tablet) and an interview of two questions: "What are the similarities between these medications?" and "What are the differences between these medica-

tions?". During the interview, the interviewee was given the possibility of handling the packs containing the medications.

After analyzing the interviews, three major knowledge-level groups were characterized on the basis of the information that the interviewee was able to provide in response to the questions. The groups were subdivided according to the specific details of the information.

RESULTS

The responses from the 124 interviews were grouped to form the knowledge-level groups. The information given in each interview was used to create a profile that related such knowledge to the benefits it brings to the population, such as the protection offered by knowledge of the active substance and people's capacity to choose generic drugs, among other factors. The set of responses led to the establishment of three major groups:

- Group 1: Demonstration of full knowledge of the subject;
- Group 2: Demonstration of limited knowledge of the subject;
- Group 3: No demonstration of any knowledge of the subject.

Group 1

The first group was characterized by clear knowledge of the active substance in the medication. Fourteen people showed this, corresponding to 11% of the sample (Table 1). People were said to be knowledgeable if they were able to identify the active substance, the therapeutic class and the uses of all the specialties presented. For these people, it was clear that these were different products containing the same active agent. It must be noted that, since the time of this survey, there has been a change in the legislation, in which it was determined that medications of composition similar to a reference medication registered with the federal authorities can only be identified and commercialized by the brand or commercial name ("similar" drugs according to Brazilian legislation). Only medications approved according to law no. 9787 of 1999 can now be designated via generic names ("generic" drugs according to Brazilian legislation).³

Group 2

The second group was formed by 61 people (49% of the interviewees), and this group was characterized by having some knowledge of the active substance and/or the class of the medications. These peo-

Table 1 – Degree of knowledge of analgesics. Group 1: interviewees who demonstrated full knowledge of the generic designation.

Degree of knowledge of analgesics	Group 1: Demonstration of full knowledge of the subject (N=14; 11%)		
	N	%	Example of response
Full knowledge of the active substance, class and use	1	7	"They are all acetylsalicylic acid, analgesics, for fever and pain..."
Full knowledge of the active substance and class	2	14	"They all have acetylsalicylic acid, they are analgesics and antipyretics..."
Full knowledge of the active substance	11	79	"They all have acetylsalicylic acid..."

ple were able to identify the active substance and/or the therapeutic class and/or the uses of some of the products presented. They did not have a clear notion that these consisted of the same active agent in different products. Within this group, 56% knew that these products were analgesics, or "for pain", or could relate the brand to the active substance, even if unable to identify that all the products presented the same component. The other 44% could relate the brand to the use, or found a relationship between the brands (Table 2).

One of the subgroups consisted of people who were able to relate the therapeutic use of the medication to the pharmaceutical specialty. For example, one product was cited mostly in relation to headache, another in cases of fever and a third as an anti-inflammatory drug. These individuals had very limited knowledge, because despite being able to indicate a given specialty, they attributed differences in specialty that do not exist in relation to therapeutic use (Table 2).

Group 3

The third group included the people who only cited the brand, said they were all the same or all different

without giving reasons, cited a non-therapeutic similarity or difference, or simply said they did not know. This group was formed by 49 people, corresponding to 40% of the total sample (Table 3).

Taking the results as a whole, it can be seen that the majority of the people in the sample (around 90%) simply do not know what active substance is present in pharmaceutical specialties that they frequently use. Consequently, people often do not make use of a given product because they know they are unable to ingest that active agent, but they end up using it with a different brand name. Some of the declarations illustrate this: "... There was no way I'd take product E, because it attacked the heart, and so I was taking product A, and now the doctor has prohibited...", "... I don't take product E, I don't know what it's got in it that's not good for me...". Similarly, they often attribute collateral effect to the specialty, rather than to the active substance. The effects most frequently cited were acceleration of the heart rate and stomach irritation, for example: "... Product E gets my heart going faster...", "... If you take medication A without sugar, it gives you stomach ache...", "... It's not good for you...", "... Because of its size, product D hurts the stomach...", "... Product D gets my heart going faster...".

Table 2 – Degree of knowledge of analgesics. Group 2: interviewees who demonstrated limited knowledge of the generic designation.

Degree of knowledge of analgesics	Group 2: Demonstration of limited knowledge of the subject (N=61; 49%)		
	N	%	Example of response*
With limited knowledge of the active substance or class			
Interviewees knew the use or class	28	46	"They are all for pain..."
Interviewees could relate the brand to the active substance	6	10	"A and B have acetylsalicylic acid..."
No knowledge of the active substance or class			
Interviewees could relate the brand to the use	14	23	"B and E are for fever, and aspirin is for headache..."
Interviewees found a relationship between the brands	13	21	"E is similar to A and C is for inflammation..."

*Capital letters indicate the generic designation of the drugs.

Table 3 – Degree of knowledge of analgesics. Group 3: interviewees who demonstrated no knowledge of the generic designation.

Degree of knowledge of analgesics	Group 3: No demonstration of knowledge of the subject (N=49; 40%)		
	N	%	Example of response
Interviewees could cite the brand	15	31	"They are all very good, but A is good for everything, even for the heart..."
Interviewees said they were all the same (without reasons)	3	6	"I think they are all the same..."
Interviewees said they did not know	19	39	"I don't know of any similarities or differences..."
Other non-therapeutic similarities and differences cited	7	14	"They are all white..."
Interviewees said they were all different (without reasons)	5	10	"There is no similarity, even the packaging is different..."

Despite the results presented, some people used ways of differentiating between the pharmaceutical specialties that did not fit in with the expected response. They pointed out characteristics of the specialties that did not help from the point of view of safety and rational usage, but which in many cases denoted that the name of the specialty is a reference and has its own identity, independent of the active substance: "... Product D has been around a long time; I used it when I was a child...", "... I used to use product D, and then I started using product E, and now I only use product A...", "... Medication A is better in all senses...", "... I prefer product A because it is more complete than the others...", "... I only take product A...", "... Product B does not leave a taste in the mouth like A does...". These declarations, from the frequency with which they were observed, suggest that the brand name is a much more striking and deep-rooted form of identity than the generic designation, in the culture of the use of medications.

DISCUSSION

The drawing up of the knowledge-level categories was done in accordance with the responses to the open questions. The profiles of the groups were outlined from the level of information demonstrated in relation to the active component of the analgesic medications. The investigation did not seek to gauge whether the individuals who demonstrated a greater level of knowledge really utilized the medications more correctly. Nor did it allow inferences to be drawn regarding the existence of other mechanisms that could protect the individuals who demonstrated limited knowledge. The work sought to evaluate how people recognize and understand the names of medications. For this, the group of medications with the most widespread utilization was selected: this was presumed to be the best-known group. The categories were drawn up after the interviews and presented a high degree of subjectivity.

People who are knowledgeable about medications are in an advantageous position. This results from the clear understanding that they demonstrate regarding the active substance, class and use of medications. With such information, these people are more protected in the event of some risk that is associated with the active agent. Moreover, it can be supposed that they may be able to choose different brands of medication containing the same active agent, thereby enabling price analysis. They are therefore capable of making choices between generic drugs and similar drugs ("*similar*" drugs according to Brazilian legislation are products with pharmaceutical equivalence but without proven bioequivalence).

People who demonstrate limited knowledge about medications may have some significant difficulties in utilizing them. Their analysis of the prices of different brands and the use of generic and similar drugs, and their protection in relation to the risk associated with the active agent are diminished. Those that can relate the brand to the active substance have protection in relation to the risk resulting from lack of knowledge of the generic designation. However, this is a relative protection, or in other words, it is only useful when the same specialty is used. For example, for people for whom acetylsalicylic acid is contraindicated and who said that "... products A and B have acetylsalicylic acid...", they will only be protected when they utilize the same pharmaceutical specialties that do not contain this component. If these are substituted by the specialties C and D, in which these people do not perceive the presence of the active agent, they will be exposed to the effects of the active agents that ought to be avoided.

Individuals who do not have knowledge of medications do not have the knowledge needed for making rational use of them. They are less protected in the event of the active agent being contraindicated in a specific situation. Without the minimum of information, analysis of the prices and use of generic and similar medications becomes very difficult.

The lack of knowledge of the essential characteristics for the utilization of these products with a minimum of safety, among the majority of the population, which was seen specifically in relation to the group of medications with which they have greatest contact, indicates a need for action by healthcare professionals regarding the characterization of the public's knowledge. Information regarding medications, both for those sold over the counter and on prescription, must demystify possibly erroneous concepts among the public and contribute towards economical and rational utilization. In relation to medications sold over the counter, it also needs to be highlighted that many products have poor therapeutic quality⁶ and that advertising has an inductive power⁵ that seeks to associate particular and exclusive positive characteristics to each brand.

Healthcare professionals must recognize the difference between passing on information and educating the patient, because it is difficult to evaluate how such information is comprehended. Patients must be strongly stimulated to make comments and have their doubts clarified, thus enabling the acquisition of the knowledge needed for using medications safely and rationally.

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