

SELF MEDICATION AND THE INDISCRIMINATE USE OF THE DRUG NIMESULIDE BY RESIDENTS OF TEIXEIROPOLIS-RO

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ABSTRACT

The class of analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), since marketed, have always been the best-selling. According to the mechanism of action, they may act by blocking cyclooxygenase, considering the COX 1 and COX2 pathways. In this study, a survey was carried out on the use of nimesulide, one of the currently sold NSAIDs, which presents a selective inhibition of COX 2 as a mechanism of action. Considering the demographic density of the municipality of Teixeiraópolis - RO, it was proposed an analysis of the nonsold use, in the form of tablets containing 100 mg, presented in forms of: similar, generic and reference, during the period from September 2017 to June 2018. The data were analyzed considering the sales inventory in pharmacies, being separated the sales with and non-prescription. Altogether, a total of 3,520 units were sold in three pharmacies in the municipality, of which 40% were sold by prescription and 60% were purchased without prescription. Regarding pharmaceutical orientation, even though they may cause adverse effects that put the health of the patient / user at risk, they were not analyzed. In this way, it can be concluded that, despite the possibility of avoiding all the annoyances of the use without medical and pharmaceutical follow-up, some studies indicate that it is possible to leave them less dangerous, provided some concepts are followed, correct doses in the time sure with the exact medications for the patient and never dispense the consultation to a health professional whether he is a doctor or a pharmacist.

Keywords: Nimesulide, Anti-inflammatory, Self-medication and rational use.

INTRODUCTION

The city of Teixeiraópolis is a small Brazilian town located in the central region of Rondonia, its appearance was given by the agricultural core, and its name is a tribute to the Colonel Jorge Teixeira de Oliveira, first governor of Rondonia state. The population according to the last census (2010) was around 4.893 (four thousand eight hundred ninety three) inhabitants, an estimation of the population for 2017 was 4.931 (four thousand nine hundred thirty three) inhabitants distributed between the rural area and the urban area, 350 (three

hundred and fifty) km far from the capital Porto Velho¹.

Since the launch of the analgesic and non steroidal anti-inflammatory drugs (NSAID), were always among the best sellers and most distributed on the public health system. According to the National Health Council (NHC), they are part of one of the most used classes by Brazilians². The self medication is practiced by the person itself, suggestion of friends, balcony attendants or reusing an old doctor's prescription³.

The NSAID act in the synthesis of prostaglandin, by the cyclooxygenase enzyme inhibition (COX-1

and COX-2), being able to act selectively on the inhibition of COX-1 which is responsible for the production of gastric mucus and inhibiting the release of thromboxane, what promotes the platelet aggregation⁴. In contrast, the AINS selectively for COX-2, act directly on the inflammatory process not interfering on the gastric mucus and differently from the first, they act releasing thromboxane what promotes the platelet aggregation, intensifying the healing process⁵.

In the selective process, between an inhibitor of COX-1 and COX-2, it must be taken into consideration the kind of patient: children, elderly, carriers of diseases involving the digestive tract, circulatory disorders, time of usage, among others, because either one can unleash significant side effects, also leading to death. This situation is more imminent for the inhibitors of COX-2, once its long usage can cause cardiovascular disorders and the formation of thrombus⁶.

The action mechanism for the NSAID, even though acting in different ways, are basically the same, besides the specific effects of inhibition of COX 1 and COX-2, are also suggested the unspecific inhibitors of COX, acting simultaneously in both ways⁷. However, the determination of the effect among the several types of anti-inflammatory non steroidal are practically the same, but there's a difference in the therapeutic answer of each individual for each drug, supporting the fact of the proposed mechanisms are not very defined⁸.

Considered of the best selling NSAID, nimesulide is used on the inflammatory process, presenting effects in pain relief and a little scale of antipyretic⁹. The activity of this anti-inflammatory is resulting of several mechanisms as selective inhibitor of the enzyme that synthesizes the prostaglandin, the cyclooxygenase COX-2, which is released during the inflammation, with minimum activity over COX-1, thus, causes the inhibition of phosphodiesterase 4, with the reduction of superoxide anion, scavenging of hypochloridic acid, inhibition of proteinases (elastase collagenase), prevention of inactivation on alpha-1-protease inhibitor, inhibition of the release on basophils histamine and humans mast cells and inhibition of the histamine activity⁶.

The inappropriate use of this medication can cause damage to health, by the fact of being available without control it's easy for people to consume it without orientation, in any amount, without caution of the toxicological issue⁹⁻¹⁰. However, the side effects caused by the use of AINS can be minimized or even avoid¹¹, therefore its needed to put in practice the

Pharmaceutical Care in the guideline of the correct use of the medication, that is not to use the medication without medical prescription nor pharmaceutical orientation¹².

METHODOLOGY

This is a descriptive cross-sectional qualitative and quantitative study, in which it was sought to evaluate the inventory of sales of 3 commercial pharmacies in the municipality of Teixeiraópolis - RO identified by A, B and C, considering the geographical location and because they are of great client/patient movement, their main objective being to elucidate the total consumption of the drug in an established period of September 2017 to June 2018 establishing comparative studies in the dispensations of Nimesulide drug of the NSAID class partially selective for COX-2, with and without prescriptions, not taking into account the manufacturing laboratories.

The data collection took place from supply of sales inventories for the drug nimesulide, considering with and without prescription. Pharmacies were randomly chosen, however, the location was taken into account, being Pharmacy A to more closely linked to the Municipal Hospital and Basic Health Unit (BHU), B for the most centralized in the city and C for the pharmacy further away from the commercial center. It is emphasized that due to the small size of the urban area, both pharmacies (B and C) are located in the central commercial area of the city, despite its different locations.

The results obtained were tabulated and treated using tools statistics for inference of the results in the population of the municipality where the study was developed.

RESULTS AND DISCUSSIONS

When investigating the spreadsheets contained in the inventory provided by pharmacy A, monthly during the 11 months of the study (September 2017 to July 2018) the pharmacy sold around 155 boxes of nimesulide, with 62 boxes prescribed and 93 boxes not prescribed. The total after months studied was 1705 total boxes, where 682 boxes had their outputs through previous presentation of prescription and 1023 boxes were sold without the use of prescription. Leading the census carried out by the Brazilian Institute of Geography and Statistics - BIGS in 2010¹¹ which estimated the total population of the city at 4893 inhabitants, estimated in 4931 inhabitants in 2017¹ and based on the hypothesis that each box sold in this pharmacy was for a single person, it can be stated that around 35 to every 100 people (35%) in the city used nimesulide retained only for this pharmacy.

Pharmacy B, according to the inventory analysis, sells an average of 110 boxes of nimesulide, 44 boxes through prescription and 66 through (not prescribed), totaling 1210 boxes sold in 11 months studied, being 484 boxes with previous presentation of prescription and 726 without the previous presentation of the prescription. This corresponds to approximately 25% of the total population of the city. Is the same as saying, based on the assumption that each box sold was to a different individual, that 25 out of 100 people in the city bought nimesulide, independent of its state within a period of less than one year in a single pharmacy.

The lowest number of releases found was in pharmacy C, which presented monthly average of approximately 55 boxes of nimesulide per month, 22 boxes sold through prescription, 33 boxes sold without prescription, totalizing 605 boxes sold at the end of 11 months surveyed. Of this total, it's consider that 242 (40%) boxes were sold with a prescription and 363 (60%) boxes sold without prescription. The total, considering the population of the municipality, represents approximately 12% of sales. Thus, based on the same hypothesis as pharmacies 12 people out of 100 bought a box of nimesulide in a period of 11 months in pharmacy C.

The data draw attention when adding the amount of nimesulide sold by pharmacies A, B and C, reaching a monthly average of 320 boxes sold, representing approximately 7% of the population in the municipality of Teixeiraópolis. This result, despite being small, when

considering the use of medication that can cause health risk to the population it's very large.

Analyzed in the total period of the survey, the sum of the 3 establishments totalizes 3520 boxes of nimesulide sold in 11 months (Figure 1), with only less than half of this amount, 1408 boxes, 40% of the total were sold with prescription (Figure 2). And, in the amount of 2112 boxes sold, 60% of the total represent who have acquired the medication without prescription (Figure 3).

Considering the uses with and without medical prescription and also attributing an unit for each citizen would express that approximately 72% of the population of Teixeiraópolis used nimesulide for pains or inflammations. That would be the same as saying that 72 out of 100 people in the city bought nimesulide.

FINAL CONSIDERATIONS

The data found in the inventories of the analyzed pharmacies shows that the use of NSAIDS, even in small municipalities, are quite significant and even more substance, and serious side effects may occur by the use of nimesulide, a selective COX-2 inhibitor. In this way, it's presupposed that informative campaigns to the population should be carried out in order to reduce risks caused by medicines, especially without prescription, exercising the proposed by the World Health Organization by the correct use of the medication, increasing the life quality of the population.

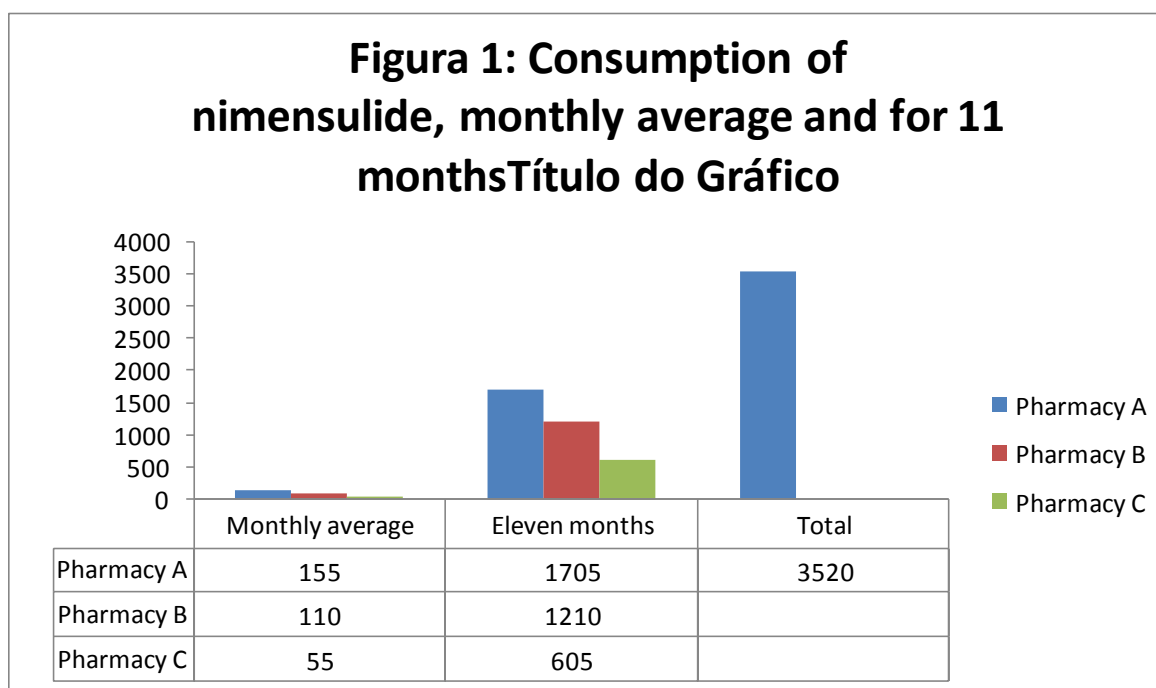


Fig. 1: Consumption of nimesulide, monthly average and for 11 months
Título do Grafico

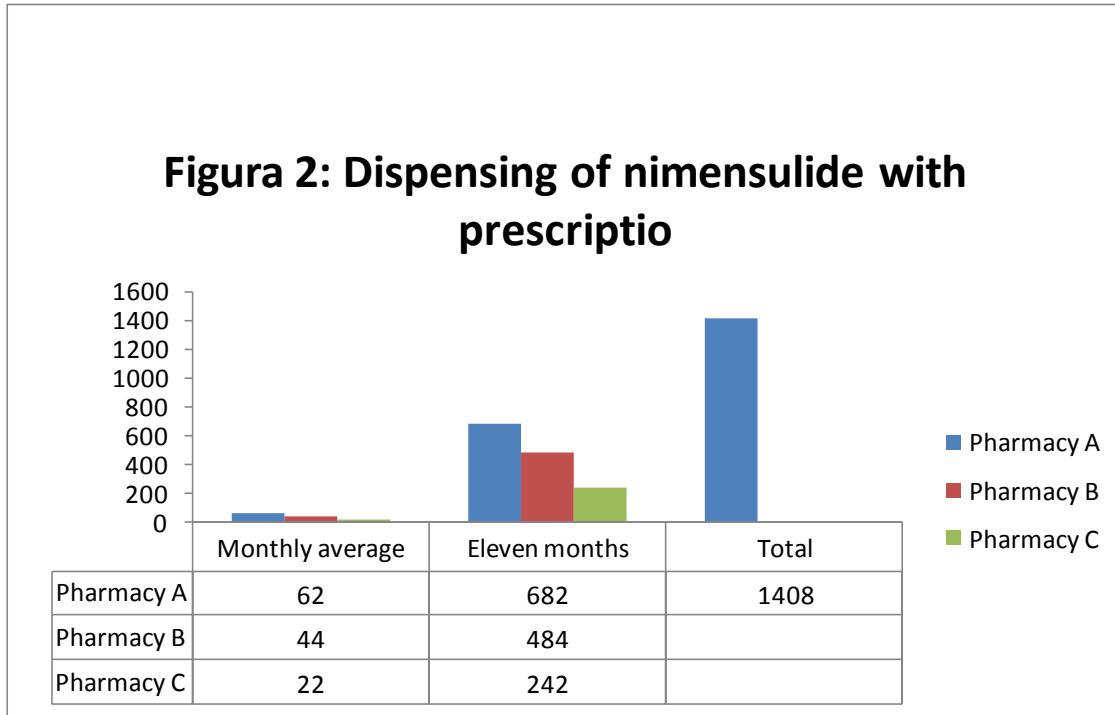


Fig. 2: Dispensing of Nimesulide with prescriptio

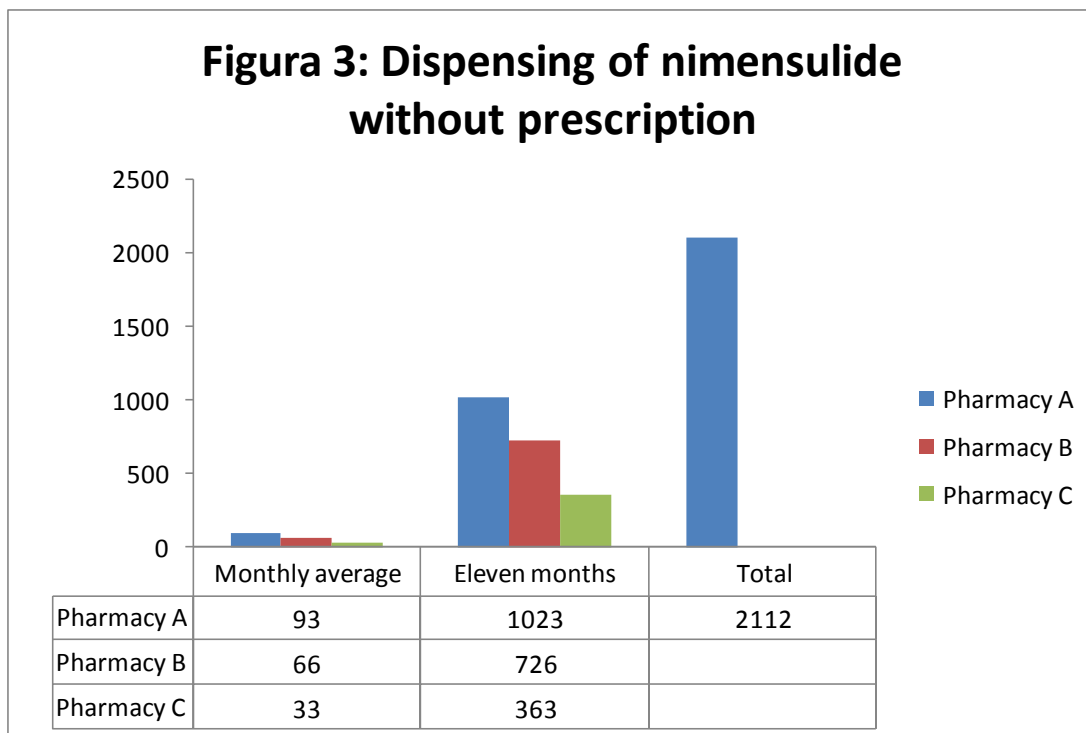


Fig. 3: Dispensing of Nimesulide without prescription

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