Agranulocytosis Drugs: The Case of Metamizol

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Abstract: Agranulocytosis is an event that may endanger life and that may occur by the use of multiple medications. Metamizol, it is a drug classically associated with this event, but in some cases it is preferably used in certain pathologies for its beneficial properties. Your hematologic toxicity has led to its ban in over 20 countries. Therefore, it should review the frequency with which this complication can to warn and guide the patient in each case.

Keywords: Agranulocytosis, metamizol.

INTRODUCTION

Agranulocytosis literally means absence of neutrophilic leukocytes, although the term is commonly used as somewhat vaguely can refer to absolute neutrophil counts of less than 100, less than 200 or less than 500 per microliter. Some, however, are more accurate to say that: Neutropenia is lower leucocyte count 1,500 cells / mm³. Its severity is classified quantitatively, as follows: mild neutropenia, from 1,000 to 1,500; moderate, 500 to 1,000, and severe least 500 cells / mm³. Agranulocytosis is the absence of cells of myeloid series in the bone marrow, in addition to neutropenia in the peripheral blood (usually less than 500 cells / mm³) [1].

The frequency of this problem is of 1-5 cases per million population per year; association with drug use accounts for about 70% of cases. The drugs involved are: thyroid (thionamides), anti-inflammatory, psychotropic; gastrointestinal, cardiovascular and dermatological agents; antimicrobials, anticonvulsants, diuretics, anti-diabetic (sulfonylureas) and antiadrenals [2].

METAMIZOL

Metamizol¹ is an antispasmodic-antalgic-antipyretic, originated in Germany; it is estimated that over 10,000 tonnes of the drug is consumed each year in the world [3] and that about 27,600 prescriptions per year are performed in hospitals in the Health Sector of Mexico [4]. Your hematologic toxicity has led to its ban² in over 20 countries (Sweden³, USA, UK, etc.) [3,5]. The prohibition in the US in particular has favored the counter of this medicine in neighboring South (Mexico), a circumstance for which he is also known as "Mexican aspirin" [6,7], although some have considered This popular as a derogatory term [8], the Anglo-Saxon authors clarify that simply use that term because that Americans refer patients who get aspirin in Mexico [6].

It has been estimated that the risk of agranulocytosis following administration of metamizol is 0.6 – 1.2 cases per million users per week⁶ and that the risk is no greater, statistically significant compared to other antipyretic analgesics such as acid aspirin, paracetamol, the Butazones⁶, diclofenac, indomethacin, and piroxicam [3, 9]; in a public hospital in Mexico, some cases of agranulocytosis was found by metamizol in ten years [4]. Therefore it has been argued that the abolition of the sale of metamizol in some countries, it is not supported by the evidence-based medicine [10] and even some doubts about the reliability of epidemiological studies performed [11]. It is postulated that the mechanism involved in hematologic toxicity is autoimmune [6] and that the risk is higher in women [12, 13] in elderly [13], which increases with dose, and it may even appear after treatment [14] interrupted. The actual incidence of agranulocytosis, for whatever reason, is around 5-8 cases / million inhabitants / year, and aplastic anemia, 2-3 cases / million inhabitants / year. The risk of aplastic anemia with any pyrazolone is low. Metamizol can also produce other leukopenia, thrombocytopenia, and skin reactions [15-18].

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²In the United States and Britain, its official name is dipyrone (pyramidion); in India, China and Russia, is analgina; in France, noramidopirina; in Hungary and Yugoslavia, noramidopirina (aminophenazona) in Japan, sulpyrine (20,21), and in Uruguay, aminopyrine or metampirona (5); however, its international name, is metamizol (20).

³The ban was in the 1970s; in the Boston study in the European countries and Israel, the odds ratio was 5.2 (with an interval of 0.9 to 33.3 in Budapest and Barcelona, respectively) (13)

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CONCLUSIONS

Agranulocytosis, is a life-threatening complication (mortality 3-25%) [5], may occur by the use of multiple drugs; in the case of metamizol, it is a known complication; however, in this case, maybe the risk is not more frequent than with the use of other similar drugs, but caution should be exercised in their use for not more than one week; and not to exceed the dose. Of course, we must follow them insisting patients of the importance of knowledge and, related, the exact names of drugs to prevent, for example, confusion between metamizol (dipyrone) and methimazole (thiamazole), as can be seen in the summary of an article [1]; This is even more important in the sometimes illegible, medical writing [19].

REFERENCES