EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 9
Issue: 3
33-35
Year: 2022

ACUTE INTOXICATION BY METOCLOPRAMIDE OF A PEDIATRIC PATIENT IN A HOSPITAL IN COLOMBIA, A CASE REPORT

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Article Received on 05/01/2022 **Article Revised on 26/01/2022** **Article Accepted on 16/02/2022**

Metoclopramide is considered a gastrokinetic drug with antiemetic characteristics. Although it shares physical properties with procainamide, metoclopramide does not have antiarrhythmic or local anesthetic effects. Historically, its development was initially intended for the treatment of nausea during pregnancy, but it is also used in the management of nausea and vomiting induced by chemotherapy, in diabetic gastroparesis and in all those disorders in which the digestive transit is reduced.[1]

Extrapyramidalism due to metoclopramide occurs in 1 of 500 patients, being a fairly significant adverse reaction at present, which has led to conditioning its use in different groups, mainly pediatrics. The antiemetic effects of metoclopramide are the result of central dopaminergic antagonism and its effects. gastrokinetic effects. In addition, it also has antagonistic effects on 5-HT3 receptors, also involved in the mechanisms of nausea and vomiting.[2]

It has been found in most of the case reports that we can find acute metoclopramide poisoning, patients who make inappropriate use of the drug by self-medicating high doses of it, without medical prescription or for suicidal purposes, can also present as this particular case, Accidental administration of the drug in the pediatric population may result in increased frequency and/or intensity of side effects. Contact with the drug, in acute intoxication, refers to a single contact in which the symptoms generally occur suddenly and violently as a result of the absorption of a large dose of the drug.[3]

Next, a case report of acute metoclopramide poisoning associated with extrapyramidalism syndrome will be presented.

CASE REPORT

A 4-year-old patient, weighing 14 kg, with no significant prenatal history, from a rural area, of mixed race in the arms of his mother, was admitted to the pediatric emergency service of a hospital in Colombia, who reported that after ingesting 10mL of metoclopramide (antiemetic and prokinetic accidentally, I present a clinical picture of approximately 6 hours of evolution consisting of an episode of neck stiffness, an hour ago the patient has presented a generalized muscle contracture, opisthotonus, trismus, dysglossia, a reason that alarmed relatives reason why they decide to consult the emergency room.

At the time of admission, an alert patient is received, without motor or sensory alterations Glasgow 15/15 normotensive with adequate blood pressure figures for percentiles according to age and weight, tolerating oral and ambient oxygen, normal heart rate for, rest of vital signs in goals. The cephalocaudal physical examination found an algic patient, in regular general conditions, head without evidence of trauma, isochoric pupils normoreactive to light, otoscopy without alterations, mobile neck without signs of stiffness, on cardiopulmonary examination we found well expanded symmetrical thorax, lungs well ventilated without hyperaggregation, well-pitched rhythmic heart sounds without murmurs, soft depressible abdomen, eutrophic symmetric limbs, no cyanosis, muscle strength 5/5 in all limbs, no signs of hypoperfusion, neurologically no apparent motor deficit, ROT ++/++ ++, without signs of neurological focus.

Patient who, after subsequent initial evolution, decided to be admitted under a diagnosis of extrapyramidal disorder due to an adverse event of a medication (Metoclopramide), to perform paraclinical tests; complete blood count to look for changes in cell lines, kidney and liver function tests to detect acute organic

injury, initially management with intravenous fluids was started and evaluation by the pediatric service was requested for 24-hour neurological observation.

After admission, a paraclinical report is received that shows a hemogram with mild normochromic anemia, normocytic, platelet count within normal ranges, white line without alterations in its cell differentials, bun and creatinine in normal ranges, liver function tests with no data of injury. acute (see table 1). Regarding the hemodynamic status of the patient, it presented a satisfactory evolution, without presenting new episodes of extrapyramidalism, patient who completed 48 hours of neurological observation, a new complete neurological examination was carried out that did not show any signs of neurological focalization, nor motor or sensory deficit, reason by which after complying with institutional protocol of medical surveillance, it is decided to discharge the patient with symptomatic outpatient management and follow-up by pediatric neurology.

Table 1.

PARACLINICS	
HEMOGLOBIN	11.8 G/DL
HEMATOCRIT	35.2%
ERYTHROCYTE COUNT	4.05X10*6/MM*3
MEAN CORPUSCULAR VOLUME	87 FL
MEDIUM CORPUSCULAR HB	29.2 PG
PLATELET COUNT	302 X10*3/MM*3
LEUKOCYTE COUNT	11.4 x10*3MM*3
GRANULOCYTES	39.8%
LYMPHOCYTES	52%
MONOCYTES	8.2%
BUN	12 MG/DL
CREATININE	0.4 MG/DL
GLUTAMATE-PYRUVICA TRANSAMINASE	23 U/L
TRANS GLUTAMAT-OXALACETIC AMINASE	33 U/L

DISCUSSION

A patient who presents with a neurological condition such as the one discussed in this clinical case, we must take into account other differentials such as tetanus or meningeal diseases, which are diseases that can have the same clinic and the diagnosis is mainly clinical in most cases. However, in the case reviewed, a process of tetanus is ruled out, because the patient did not report having presented previous traumas by which the Clostridium tetani bacteria could have been inoculated, on the other hand, the patient presented neck stiffness, data that could be correlate with a case of meninguitis, but in the patient clinical data such as fever, headache and other semiological signs such as Kernig and Brudzinski were absent. This would leave an open topic for debate about whether a lumbar puncture should be performed on this patient to a differential diagnosis.[4.5]

Thus, the oral dose in adults is 10-20 mg every 8 hours, taken before meals. Parenterally, it is recommended not to exceed 10 mg in each dose, and we can use them at intervals of every 6-8 hours. In vomiting caused by highly emetic cytotoxics, the doses will be higher. In the pediatric population, the maximum recommended daily dose should not exceed 0.5 mg/kg/day, and the recommended doses are: up to 1 year of age, 1 mg 2 times a day; 1-3 years, 1 mg 2-3 times a day; 3-5 years, 2 mg 2-3 times a day; and 5-9 years, 2.5 mg 3 times a day, in this case estimating what was referred by the mother and calculating the patient ingested 10 times more than the recommended dose for her age group, thus producing the adverse reaction due to medicines.[6, 7]

Thus, various authors have described the main clinical manifestations of this syndrome, as is the case of Dr. Virginia Viesca-Contreras, who classified them according to their organic involvement as follows: in the level of consciousness and behavior we find major symptoms such as Coma, confusion, excessive mood activation and lesser symptoms such as agitation, nervousness, insomnia within the autonomic symptoms are divided into major; Fever, hyperhidrosis, chills and minor symptoms such as tachycardia, dyspnea, tachypnea, diarrhea, elevation or decrease in blood pressure and to finish the neurological symptoms we have the major symptoms we will find myoclonus, tremor, rigidity, hyperreflexia and in the minor symptoms alteration of coordination, mydriasis, akathisia.[8]

To conclude regarding the management of this syndrome, it will be multifactorial and will depend on many associated factors, it should be noted that each case is unique, and the context in which we are must be taken into account, if it was an abuse of the medication, if it was an accidental dose as in this case, most authors recommend treating the causes, the pharmacological interactions that occur, however the main pillar will be to treat the clinical symptoms presented by patients and help eliminate the drug from the body, some patients do not go to require but only neurological observation, hydration, monitoring of vital signs and paraclinical control for evidence of acute organ failure.[9;10]

CONCLUSION

Using antiemetics is a very frequent practice by all general practitioners and different specialties, this has led to the prescription of this medication on an outpatient basis, thus increasing the risk of children consuming this medication accidentally, causing cases of acute intoxication., which in most cases, depending on the amount of medication they consume, will be mild manifestations, in some cases they can compromise the patient's life, it must be taken into account that for the treatment of each case it must be individualized and treat its adjacent causes and call attention to parents to be more careful with children and this type of medication.

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