Pediatric Oncall Journal
Volume : 20, Issue 2:62-63
DOI: https://doi.org/10.7199/ped.oncall.2023.20

PEDIATRIC ONCALL
CHILD HEALTH CARE

IMAGES IN CLINICAL PRACTICE

ACUTE OROMANDIBULAR DYSTONIA

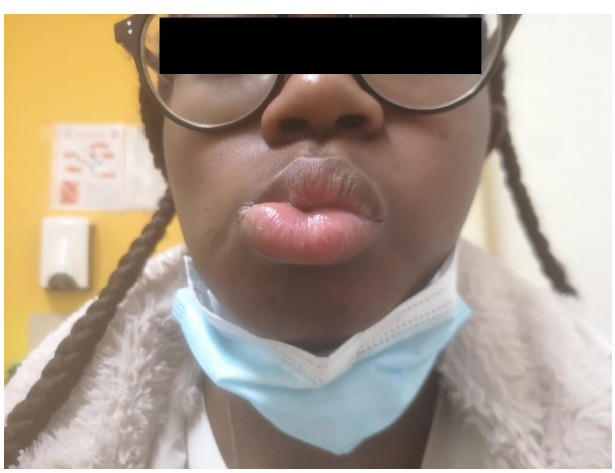
Inês Afonso Belo[1], Ana Rita Ramos[2], João Nuno Franco[2].
[1]Department of Pediatrics, Centro Hospitalar de Leiria, Portugal,
[2]Department of Pediatrics, Hospital Garcia de Orta, Portugal.

KEYWORDS
Metoclopramide, acute dystonia, side effects.

ARTICLE HISTORY
Received 14 January 2022
Accepted 25 January 2022

A previously healthy 14-year-old girl was brought to the Emergency Department by the paramedics due to a sudden onset of painful involuntary oromandibular muscle contraction and swollen lips. She also referred sporadic vomiting, once or twice a day, and abdominal pain for three days. On physical examination, she exhibited an oromandibular muscle contraction, deviating to the right side and angioedema of the lips (Figure 1). Her physical and neurological examination was otherwise unremarkable. She had no sialorrhea, no dyspneia, no rash and no tongue swelling. She weighted 41 Kg (between the 10th and 25th percentiles) and her height was 156 cm (25th percentile). On the previous day, her primary care physician prescribed metoclopramide, 10 mg three times a day (0.7 mg/kg/day) for the vomiting, in the context of a probable gastrointestinal infection. Due to the hypothesis of an extrapyramidal effect of metoclopramide, intravenous biperiden was administered and there was a resolution of the dystonia and the edema within a few minutes (Figure 2).

Figure 1. Adolescent at admission showing an orofacial dystonia.



Address for Correspondance: Inês Belo, Hospital de Santo André - Rua das Olhalvas, Leiria, Portugal Postal address: 2410-197 Leiria, Portugal.

Email: ines.ac.belo@gmail.com

Figure 2. Adolescent after biperiden if you agree.

What is the diagnosis?

Metoclopramide is a dopamine receptor antagonist. It is used in various gastrointestinal disorders such as nausea, vomiting and gastroparesis.[1] Although metoclopramide is one of the most frequently prescribed anti-emetics, the side effects have been reported in up to 20%[2] of patients and in children, extrapyramidal reactions are the most common ones, with an incidence of 9%.[3] Acute dystonia typically occurs within 24 to 48 hours of initiating treatment and includes opisthotonus, torticollis, oculogyric crises and tonic muscular contractions.[4,5] Pharyngeal muscle spasms or laryngospasm are rare but potentially life-threatening.[6,7] Neurological adverse effects of metoclopramide are idiosyncratic and are not dose dependent, although it is more frequent with higher doses.[8] Therefore, if metoclopramide must be given, doses should not exceed 0.5 mg/kg/day.[8] These reactions are usually self-limited. Acute dystonic reactions may represent a challenging diagnosis in the emergency room, as there is a high probability of misdiagnosis with other conditions like tetanus, partial seizures, encephalitis, meningitis or allergic reactions.[5,9] In our case, besides the dystonia, the adolescent also presented angioedema that resolved after treatment. This finding is uncommon but has yet been described either with metoclopramide or other drugs such as haloperidol.[10,11] When appropriate, other antiemetics such as ondansetron should be

used, preferably as a single dose, thus reducing the risk of extrapyramidal reactions.

Compliance with Ethical Standards

Funding: None

Conflict of Interest: None

References:

1. Tianyi FL, Agbor VN, Njim T. Metoclopramide induced acute dystonic reaction: a case report. BMC Res Notes 10, 32 (2017). https://doi.org/10.1186/s13104-016-2342-6
2. Shuja M, Abanamy A, Deshpande A. Extrapyramidal Reactions Caused by Metoclopramide in Children. 1992. https://doi.org/10.5144/0256-4947.1992.509
3. Lau Moon Lin M, Robinson PD, Flank J, Sung L, Dupuis LL. The Safety of Metoclopramide in Children: A Systematic Review and Meta-Analysis. Drug Saf. 2016;39(7):675-687. doi:10.1007/s40264-016-0418-9
4. Karagoz G, Kadanali A, Dede B, Anadol U, Yucel M, Bektasoglu MF. Metoclopramide-induced acute dystonic reaction: a case report. Eurasian J Med. 2013;45(1):58-59. doi:10.5152/eajm.2013.10
5. Zikidou P, Meziridou R, Alexiadou S, et al. Acute Dystonic Reaction in a 14-Year-Old Boy after Accidental Overuse of Nasal Metoclopramide. Case Rep Acute Med 2021;4:1-6. doi: 10.1159/000512655
6. Oyewole A, Adelufosi A, Abayomi O. Acute dystonic reaction as medical emergency: a report of two cases. Ann Med Health Sci Res. 2013;3(3):453-455. doi:10.4103/2141-9248.117932
7. Collins N, Sager J. Acute laryngeal dystonia: drug-induced respiratory failure related to antipsychotic medications. J Neurol Neuromedicine. 2018;3(1): 4-7
8. Elek M, Kosa P, Tamara I, et al. Extrapyramidal Side Effects of Metoclopramide in a Child-A Case Report. Acad J Ped Neonatol. 2016; 1(4): 555568. DOI: 10.19080/AJPN.2016.01.555568
9. Yis U, Ozdemir D, Duman M, et al. Metoclopramide induced dystonia in children: two case reports. Eur J Emerg Med. 2005;12(3):117-9. doi: 10.1097/00063110-200506000-00004. PMID: 15891443.
10. Board for the assessment of medicines (2008). Angioedema and allergic reactions in metoclopramide containing products. Avaliable in: https://databankws.lareb.nl/Downloads/kwb_2009_1_metoc.pdf, accessed at December 22, 2021.
11. Masiran R. Persistent oromandibular dystonia and angioedema secondary to haloperidol. BMJ Case Rep. 2017;2017:bcr2017220817. Published 2017 Oct 4. doi:10.1136/bcr-2017-220817