

Acute chorea in adults: old and new truths

Coreia aguda em adultos: velhas e novas verdades

Francisco CARDOSO¹

¹Universidade Federal de Minas Gerais, Movement Disorders Unit, Neurology Service, Department of Internal Medicine, Belo Horizonte MG, Brazil.

Francisco CARDOSO  <https://orcid.org/0000-0003-0808-0116>

Correspondence: Francisco Cardoso; E-mail: fecardosoc@gmail.com.br

Conflict of interest: There is no conflict of interest to declare.

Received on February 6, 2021;
Accepted on February 11, 2021.



In this issue of *Arquivos de Neuropsiquiatria*, Silva and colleagues report on a series of 10 patients with acute chorea seen at an adult Neurology emergency unit¹. Their retrospective analysis of patients has some interesting results. First, the authors confirm the widely held notion that stroke is by far the most common etiology of acute chorea². This is a finding with obvious practical implication for health professionals working at adult emergency services. Once the diagnosis of acute chorea is established, the next mandatory step is to search for a likely vascular cause and to set in motion a stroke protocol. Patient number 5 in their series, who had chorea related to an insula infarction completely reversed by thrombolytic treatment, illustrates well the crucial role of following these guidelines. Another reiteration of an old truth is the finding that the majority of vascular lesions related to acute chorea are outside the subthalamic nucleus³. As the authors rightly state, chorea is a phenomenon resulting from dysfunction of a network that involves several structures and not just a specific brain area. Silva and colleagues also demonstrate that drugs are a common cause of acute chorea. This means that even in the usually stressful environment of emergency units a proper history remains of paramount importance in clinical practice. Another old truth strengthened by their findings is the role of diabetes mellitus in the causation of acute chorea. Initially reported among Asians, now it is widely accepted as a complication of non-ketotic hyperglycemia in all ethnic groups. The hyperosmolar state causes micro-hemorrhages in the basal ganglia disrupting networks and causing this hyperkinesia. Clinicians should be aware that a substantial proportion of these subjects have bilateral lesions causing bi-ballism³.

There are also some novel findings in this study. One of them is the lack of infectious causes, particularly HIV, in their cohort. Although this may be related to the small sample size, it is likely that the result reflects the widely available highly active antiretroviral therapy (HAART). The latter has caused a substantial decline of opportunistic infections in HIV+ people. In the pre-HAART era, 3% of these patients developed hemichorea-hemiballism⁴. Currently, this has become a condition rarely seen even in NEURO-AIDS clinics.

A second interesting point is related to epidemiology. The authors state that acute chorea is a rare condition although they did not mention what proportion the reported cases represent of the total of patients assessed by their Neurology service over the four years encompassed by the study. However, considering that their unit is one of the busiest emergency services in one of the biggest cities of the world, one may assume that several thousand patients were evaluated by the Neurology during the time span of their study. It is possible to speculate, thus, that acute chorea accounts for less than 1% of Neurology emergencies.

Finally, there is an intriguing case in their series. Patient number 10 had a previous history of Sydenham's chorea (SC) and developed a new bout of chorea immediately after a dental procedure. The workup failed to disclose any underlying abnormality. The authors concluded that it was a recurrence of rheumatic chorea. The diagnosis of this type of chorea is always a challenge because of the lack of any reliable biological marker³. Although SC is a possibility, there are atypical findings that suggest alternative causes. The well-established causes of recurrence of SC are new Streptococcus infections and hormonal changes. The former is almost exclusively seen below age 18 years and the latter is described during pregnancy and treatment with oral contraceptives⁵. On the other hand, sudden onset of movement disorders following a medical or dental procedure with lack of alternative etiology is highly suggestive of psychogenic nature⁶. In fact, larger series of acute movement disorders recently reported demonstrate that psychogenic etiology is the third most common cause⁷. It is important, thus, to keep this possibility in mind when seeing patients with acute-onset of movement disorders, including chorea.

References

1. Silva GD, Parmera JB, Haddad MS. Acute chorea: case series from the emergency room of a Brazilian tertiary center. *Arq Neuro-Psiquiatr*. 2021. In Press.
2. Piccolo I, Defanti CA, Soliveri P, Volontè MA, Cislighi G, Girotti F. Cause and course in a series of patients with sporadic chorea. *J Neurol*. 2003 Apr;250(4):429-35. <https://doi.org/10.1007/s00415-003-1010-7>
3. Cardoso F, Seppi K, Mair KJ, Wenning GK, Poewe W. Seminar on choreas. *Lancet Neurol*. 2006 Jul;5(7):589-602. [https://doi.org/10.1016/S1474-4422\(06\)70494-X](https://doi.org/10.1016/S1474-4422(06)70494-X)
4. Cardoso F. HIV-related movement disorders: epidemiology, pathogenesis and management. *CNS Drugs*. 2002 Oct;16(10):663-8. <https://doi.org/10.2165/00023210-200216100-00002>
5. Maia DP, Fonseca PG, Camargos ST, Pfannes C, Cunningham MC, Cardoso F. Pregnancy in patients with Sydenham's chorea. *Parkinsonism Relat Disord*. 2012 Jun;18(5):458-61. <https://doi.org/10.1016/j.parkreldis.2011.12.013>
6. Espay AJ, Aybek S, Carson A, Edwards MJ, Goldstein LH, Hallett M, et al. Current concepts in diagnosis and treatment of functional neurological disorders. *JAMA Neurol*. 2018 Sep;75(9):1132-41. <https://doi.org/10.1001/jamaneurol.2018.1264>
7. Dale RC, Singh H, Troedson C, Pillai S, Gaikiwari S, Kozłowska K. A prospective study of acute movement disorders in children. *Dev Med Child Neurol*. 2010 Aug;52(8):739-48. <https://doi.org/10.1111/j.1469-8749.2009.03598.x>