

Acute Parkinsonism and basal ganglia lesions after wasp sting

Parkinsonismo agudo e lesões de núcleos da base relacionados a picada de vespa

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A 52-year-old woman presented with acute malaise, syncope, and confusion after a wasp sting. Examination showed

cognitive impairment, bradykinesia, and rigidity. Brain magnetic resonance imaging (MRI) scan disclosed symmetric

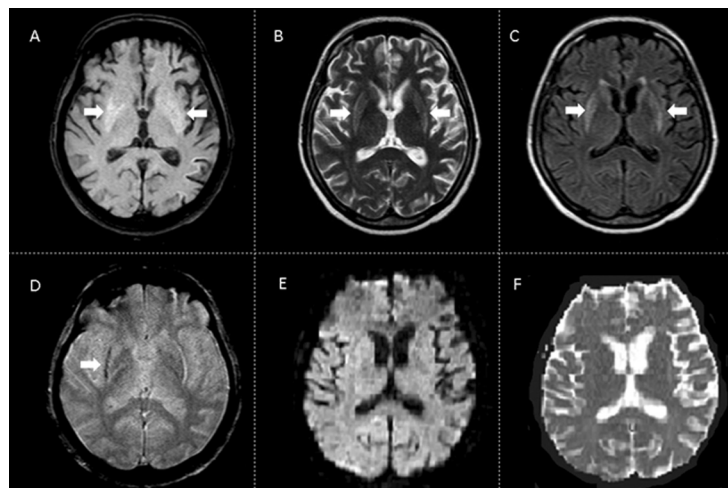


Figure 1 Brain MRI. Panel A shows symmetrical bilateral caudate nuclei and putamina T1 hyperintense signal (white arrows). Panels B and C show bilateral T2 and fluid-attenuated inversion recovery (FLAIR) weighted hyperintensities in the same structures (white arrows). Panel D shows iron deposition in the right external capsule in T2-GRE (white arrow). No restricted water diffusion was shown in DWI/ADC map (Panels E and F). After gadolinium injection, there was no contrast enhancement (image not shown).

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bilateral basal ganglia hyperintense signal (► **Figure 1**). Serum specific wasp-venom immunoglobulin E (IgE) antibodies were strongly positive. The cerebrospinal fluid (CSF) and general blood tests, as well as the electroencephalography (EEG), were normal. She had mild improvement with levodopa, and at 6-months of follow-up MRI she showed remaining basal ganglia lesions.

Anaphylaxis after insect sting (*Hymenoptera*) may cause several systemic manifestations such as diarrhea, sneezing, cutaneous rash, and angioedema. Neurological features may include agitation, headache, dizziness, confusion, extrapyramidal signs, and encephalitis.^{1,2} Basal ganglia necrosis-associated Parkinsonism has been previously reported.³

Author's Contributions

TFAA: study design, patient data collectin and manuscrit writing; KLSO: patient data collectin and manuscrit writ-

ing; MERB, JLP, CMRF, ESM: data interpretation and manuscript critical review.

Conflict of Interest

The authors have no conflict of interests to declare.

References

- 1 Casale TB, Burks AW. Hymenopter-Sting Hypersensitivity. *N Engl J Med* 2014;370(15):1432–1439 <https://www.nejm.org/doi/10.1056/NEJMcp1302681>
- 2 Maramattom BV. Wasp sting-related allergic encephalitis. *Pract Neurol* 2021;21(06):515–517. Doi: 10.1136/practneurol-2021-003007
- 3 Leopold NA, Bara-Jimenez W, Hallett M. Parkinsonism after a wasp sting. *Mov Disord* 1999;14(01):122–127. Doi: 10.1002/1531-8257(199901)14:1<122:AID-MDS1020>3.0.CO;2-S