





Eastchester clapping sign and networks related to spatial attention

Sinal de palmas de Eastchester e redes relacionadas à atenção espacial

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A 53-year-old right-handed man developed left hemiparesis (of grade 2 in the Medical Research Council Scale) and right head deviation due to ischemic stroke. When instructed to clap his hands, he brought his right hand to the midline and searched for the other hand (► **Video 1**). Fluid-attenuated inversion recovery (FLAIR) magnetic resonance imaging (MRI) scans, the unilateral spatial neglect (USN) test, and the blood-oxygen-level-dependent (BOLD) functional magnetic resonance imaging (fMRI) study are presented in ► **Figure 1**.

Video 1



Eastchester clapping sign (ECS-1 = searching in the contralateral hemispace for the other hand). In the video, the neurologist dictates the following command to the patient: “Please clap your hands.”

Link: [https://www.arquivosdeneuropsiquiatria.org/wp-content/uploads/2022/04/ANP-2022.0020-](https://www.arquivosdeneuropsiquiatria.org/wp-content/uploads/2022/04/ANP-2022.0020-video.mov)

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video.mov Online content including video sequences viewable at: <https://www.thieme-connect.com/products/ejournals/html/10.1055/s-0042-1758394>.

The Eastchester clapping sign provides evidence of USN phenomena.^{1,2} Frequently, patients with USN can ignore problems with the affected limb. This patient presented bilateral activation in the networks related to spatial attention (mainly parietal posterior lobes), and fMRI patterns indicated maladaptive plasticity.^{3,4}

Authors' Contributions

GJL, GPB, LEGGB, RB: substantial contributions to the conception or design of the work, acquisition, analysis, and interpretation of data, drafting and critical revision of the manuscript for important intellectual content, and final approval of the version to be published.

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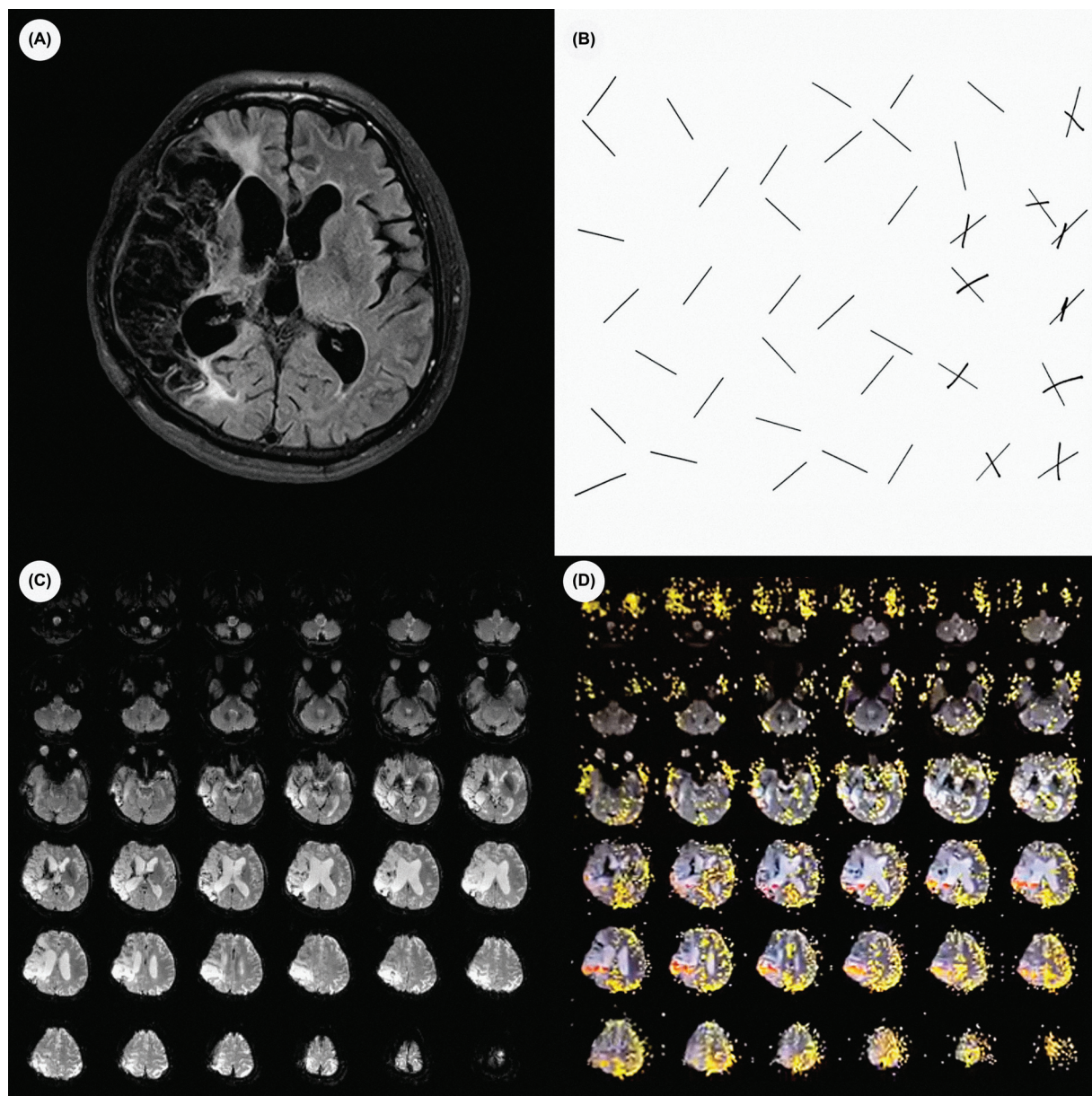


Figure 1 (A) FLAIR MRI scan showing extensive ischemic stroke in the right hemisphere; (B) line cancellation test (Albert test) indicating presence of unilateral spatial neglect; (C) BOLD fMRI study at rest showing no activation; (D) BOLD fMRI study showing bilateral activation of the parietal cortex during sensory stimulation (face-hand test).

Conflict of Interest

The authors have no conflict of interests to declare.

References

- Ostrow LW, Llinás RH. Eastchester clapping sign: a novel test of parietal neglect. *Ann Neurol* 2009;66(01):114–117
- Mukerji SS, Bevers MB, Prasad S. Eastchester clapping sign. *Neurol Clin Pract* 2014;4(02):178–179
- Corbetta M, Shulman GL. Spatial neglect and attention networks. *Annu Rev Neurosci* 2011;34:569–599
- Rema V, Ebner FF. Lesions of mature barrel field cortex interfere with sensory processing and plasticity in connected areas of the contralateral hemisphere. *J Neurosci* 2003;23(32):10378–10387