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Familial hemiplegic migraine with prolonged global aura: Follow-up findings of subtraction ictal SPECT co-registered to MRI (SISCOM)

Susana Arias-Rivas[1], Manuel Rodríguez-Yañez[1], Julia Cortés[2,3], María Pardo-Parrado[1], Pablo Aguiar[3,4], Rogelio Leira[1], José Castillo[1] and Miguel Blanco[1]

Abstract

All authors contributed equally to this work. Susana Arias-Rivas wrote the main paper. Manuel Rodriguez-Yáñez investigated the supplementary data. Julia Cortés and Pablo Aguiar performed the nuclear image studies and analysed and described the neuroimaging results. María Pardo, Rogelio Leira and Jose Castillo jointly conceived the study, followed the patient and prepared the manuscript. Miguel Blanco discussed the results. All authors discussed the results and implications and commented on the manuscript at all stages.

Keywords

Familial hemiplegic migraine, SISCOM

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A 79-year-old woman with past history of familial hemiplegic migraine that started in adolescence presented to the emergency room with acute onset of right-sided weakness, numbness and impaired verbal expression. The symptoms lasted for 20 days and after this time were completely recovered. Laboratory tests, cerebral spinal fluid studies, Holter-electroencephalography (EEG) and ultrasound studies were within the normal limits. Computed tomography (CT) at 12 and 24 hours, magnetic resonance imaging (MRI) (two and seven days), (fluid-attenuated inversion recovery (FLAIR) and diffusion-weighted images (DWI)) showed no ischemic lesions.

Subtraction ictal single photon emission computed tomography (SPECT) co-registered to MRI analysis (SISCOM) demonstrated reversible perfusion abnormalities. Consecutive SPECT images at two different times, during and after a migraine with persistent aura, show different hyperperfusion foci in the affected hemisphere causing neurological symptoms (Figure 1).[1–3]

[1]Neurology Department, ANEVAS, Complexo Hospitalario Universitario de Santiago de Compostela, Spain
[2]Nuclear Medicine Department, Complexo Hospitalario Universitario de Santiago de Compostela, Spain
[3]Molecular Imaging Group, Instituto de Investigación Sanitaria (IDIS), Spain
[4]Fundación IDICHUS, Spain

Corresponding author:
Miguel Blanco González, Servicio de Neurología, Hospital Clínico Universitario, c/Travesía da Choupana s/n, 15706 Santiago de Compostela, Spain.
Email: mblancogo@gmail.com

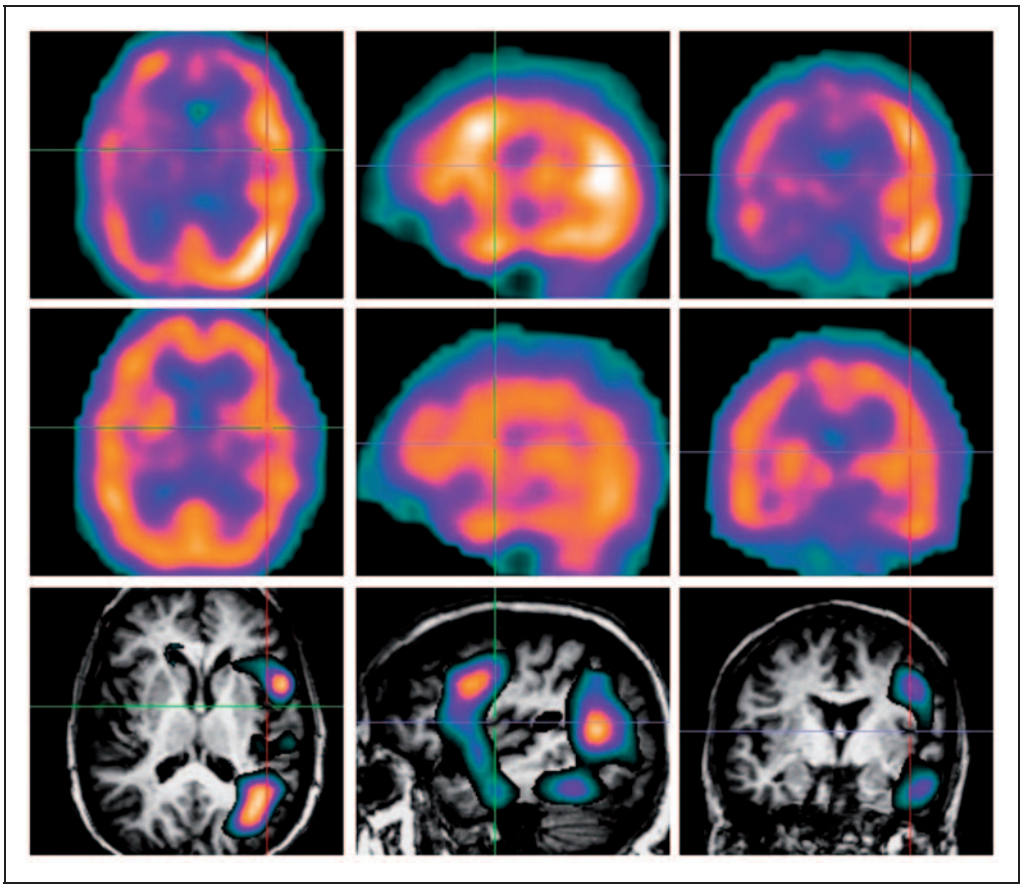

Figure 1. Top: Transverse, sagittal and coronal views of ictal single photon emission computed tomography (SPECT) on day seven showed left frontal, temporal and occipital hyperperfusion. Middle: After-recovery SPECT on day 20: Equal perfusion in both hemispheres. Bottom: Statistically significant differences image obtained from the Subtraction ictal SPECT co-registered to MRI (SISCOM) analysis (348 × 299 mm).

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Conflict of interest statement

None declared.

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