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We have read with interest the article by Sajjadi et al[1] concerning the use of MR imaging for the diagnosis of primary progressive aphasia (PPA). The authors studied the sensitivity and specificity of the visual analysis of MR imaging for the diagnosis of each PPA variant. They found that accuracy values were appropriate for the semantic variant, but somewhat disappointing for logopenic and nonfluent aphasia. Although specificity values were above 90% for the 3 variants, sensitivity for nonfluent and logopenic PPA was 21% and 49%, respectively. This issue is relevant because a biomarker showing focal neurodegeneration (eg, MR imaging) is included in the current diagnostic criteria and clinical diagnosis of PPA variants may be difficult.[2]

We published a similar study 2 years ago, but with FDG-PET/CT.[3] In our study, FDG-PET images from a cohort of 33 patients with PPA and 11 controls were visually reviewed by 5 nuclear medicine physicians to evaluate the diagnostic accuracy of the technique and the interrater agreement. Another 5 raters also reviewed the maps using Statistical Parametric Mapping (SPM), comparing each patient individually with a healthy control group (statistical analysis). Interrater agreement was moderate for visual analysis (Fleiss $\kappa = 0.568$) and substantial for statistical analysis ($\kappa = 0.756–0.881$). Sensitivity and specificity for the diagnosis of PPA (to discriminate it from healthy controls) was 87.8% and 89.9%, respectively, in the visual analysis. Interrater agreement was high in semantic and logopenic variants (at least 4 of 5 raters agreed in 100% and 84% of cases, respectively), and it was lower in nonfluent aphasia (at least 4 of 5 raters agreed in only 20% of cases). Furthermore, using images statistically preprocessed by SPM improved the agreement among raters, especially in the nonfluent variant.

We reanalyzed the data of our previous study[2] with the same method as that used by Sajjadi et al.[1] We estimated the sensitivity and specificity for the diagnosis of each type of PPA. Mean sensitivity and specificity of expert raters using FDG-PET was, respectively, 65% and 98.5% for the nonfluent variant, 62.5% and 96.2% for the semantic variant, and 89.4% and 86% for the logopenic type. With statistical analysis, the mean sensitivity and specificity were 70% and 94.1% for nonfluent, 75% and 93.5% for semantic, and 82.1% and 88% for the logopenic variant.

Thus, our study revealed higher diagnostic accuracy, especially regarding sensitivity, for the diagnosis of PPA and its variants with FDG-PET than that reported by Sajjadi et al[1] with MR imaging. This might support a better diagnostic performance of FDG-PET/CT compared with MR imaging in the specific setting of diagnosing and classifying PPA. However, studies directly comparing FDG-PET/CT and MR imaging accuracy are necessary to clarify the superiority of one technique over the other[4] or to evaluate a potential benefit of the combination of both techniques at an individual level. Furthermore, the assessment of statistical maps may reduce some of the limitations encountered when performing direct visual analysis of images.

Disclosures: Jorge Matias-Guiu—*UNRELATED*: *Board Membership*: Spanish Neurological Society, *Comments*: Editor-in-Chief of *Neurologia*, official journal of the Spanish Neurological Society; *Employment*: Hospital Clinico San Carlos, Universidad Complutense de Madrid, *Comments*: Professor of Neurology, Director of Neuroscience Institutes, Head of Neurology Department.

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