

# Letter to the Editor

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## Letter by Toscano et al Regarding Article, “Association of Leukoaraiosis With Convalescent Rehabilitation Outcome in Patients With Ischemic Stroke”

To the Editor:

We read with great interest the article by Senda et al<sup>1</sup> about the association between leukoaraiosis and inpatient rehabilitation outcome after an ischemic stroke.

To investigate the factors influencing convalescent rehabilitation outcome, Senda et al<sup>1</sup> analyzed the burden of the leukoaraiosis for each single stroke subtypes, according to the TOAST (Trial of Org 10172 in Acute Stroke Treatment) criteria. Hence, they evaluated the impact of the type of white matter damage on recovery. This showed that periventricular hyperintensity influenced motor function recovery, whereas deep white matter hyperintensity influenced cognitive function recovery. This suggests a different role of leukoaraiosis in motor and cognitive stroke outcome, based on a functional and anatomic difference between those 2 different types of white matter lesions, by involving different corticocortical and cortical–subcortical projection fibers.

In this view, it is intriguing to consider that the degree of leukoaraiosis plays also a role in poststroke dysphagia, and its persistence as well.<sup>2</sup> Also in this case, the disruption of cortical–cortical and cortical–subcortical white matter connections seems to increase the risk of swallowing impairment by lowering the threshold of input to the medullary swallowing center. Moreover, dysphagia is one of the most common consequences after stroke, presenting in ≤50% of all patients with acute stroke, with a negative effect on clinical outcome.<sup>3</sup> Approximately 13% to 15% of patients with stroke have persistent swallowing dysfunction after 6 months<sup>4</sup>; this leads to an increased likelihood of residential placement, therefore, resulting in a worsening of the convalescent rehabilitation outcome in patients with ischemic stroke.

Given the aforementioned link between leukoaraiosis and swallowing impairment, and the burden of poststroke dysphagia

on rehabilitation outcome, it could be of some interest to analyze the relationships between leukoaraiosis, recovery, and dysphagia in your large population.

Can you infer any data from FIM (Functional Independence Measure) or clinical records about swallowing impairment to assess how dysphagia affects stroke outcome in your series? Second, does the presence of poststroke dysphagia preferably affects motor or cognitive circuits? In other words, considering the interesting finding that periventricular hyperintensity predicted convalescent motor function, whereas deep white matter hyperintensity predicted cognitive function after ischemic stroke rehabilitation, is dysphagia associated with deep white matter hyperintensity more than to periventricular hyperintensity?

## Disclosures

None.

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