

Prevalence of silent stroke in Kurdistan, Iraq

To the Editor

I have 2 comments on the interesting study by Al-Shimmery et al¹ on the prevalence of silent stroke in Kurdistan, Iraq.

First, the methodology of the study needs to be reconsidered for 2 reasons: 1. Although silent infarcts, by definition, lack clinically overt stroke-like symptoms, they are associated with subtle deficits in physical and cognitive function that commonly go unnoticed.² The patients enrolled in the study were neither healthy nor asymptomatic to fill the definition of silent stroke. Actually, they had variable manifestations suggestive of stroke; namely, headache, vertigo, unusual paresthesias of the body and face, and so forth, even those with a positive history of transient ischemic attacks (TIA) (as claimed by patients themselves, and not diagnosed by doctors) were included in the study. Moreover, subjects were examined for physical and neurological signs or features of possible silent strokes, such as, exaggerated reflexes, pyramidal weakness, mild cerebellar signs, sensory signs, or long tracts signs. 2. The MRI scanner applied in the study was Siemens 1.5 Tesla (Siemens, Erlangen, Germany). The MR techniques are particularly more effective at 3.0 Tesla owing to their high signal, resolution and sensitivity, reduced scanning times, and overall improved diagnostic ability.³ The prevalence of incidental brain findings was found to be higher using high resolution MRI sequences than in those using standard resolution sequences (4.3% versus 1.7%, $p < 0.001$).⁴ These selective criteria might bias the percentage of silent stroke detected by neuroimaging studies. I, therefore, presume that 19% is not the actual prevalence of silent infarcts among apparently normal individuals in the Kurdish population as claimed by Al-Shimmery et al's study.¹

Second, regardless of the precision of 19% prevalence of silent infarcts among apparently normal individuals in the Kurdish population as stated by Al-Shimmery et al's study,¹ the option for routine screening for silent stroke in the Iraqi elderly triggers an interesting concern. I presume that that option seems justifiable in the elderly on the basis of prevailing potential risk factors for stroke, notably, hypertension, diabetes mellitus, obesity, dyslipidemia, ischemic heart diseases, and smoking,^{5,6} as well as marked stressful life events secondary to antecedent conflicts in Iraq, and exposure to persistently postwar 2003 ethnic and political struggles

and violence.⁷ However, in the middle aged subjects, screening might be selectively reserved for those with certain disorders that are grossly linked with stroke, like heart failure, chronic kidney diseases, metabolic syndrome, valvular heart lesions, malformed arterial vessels, high serum uric acid level, and positive family history of stroke. Identification of those with or at risk for silent stroke and institution of suitable preventive and therapeutic modalities would significantly decrease their future risks of overt stroke and dementia and improve their longevity.

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Reply from the Author

I would like to extend my thanks to my colleague Prof. Al-Mendalawi for his concerns regarding our study. In fact, regarding patient selection, this was justified in relation to patient's age, and not to patient's symptoms since many of these symptoms can be a somatization manifestation like paraesthesia and headache (or migraine), while vertigo of inner ear pathology is one of the most common presentations in our general neurology outpatient clinic. We were very interested in the real alarming neurological manifestation of a TIA or minor stroke, and by more detailed neurological examination, TIA patients were included because they are not full stroke patients. In general, although by definition SCIs are MRI or CT scan pathologies, but still if any specialist neurologist performs a full neurological examination, he can prove the presence of these hidden pathologies. We do not have a 3.0 Tesla MRI machine at our institute, and I doubt it will be present in a small city like Erbil. I believe such expensive machines are present in large Academic Hospitals and Research Centers, and do I agree it would be of great help in establishing the real percentages of silent cerebral infarctions. I also agree with the screening of elderly people in Iraq and other countries, and this should be a recommendation in our study.

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