Antiphospholipid syndrome is an important modifiable risk factor of stroke in the young

Sir,

I read with interest the article by Subha and colleagues on the pattern and risk factors of stroke in the young (<50-years-old)[1] and would like to point out that antiphospholipid antibody syndrome (APS) is an important modifiable vascular risk factor in this age group. Data from the Euro-Phospholipid Project Group estimated that about 50% of strokes below 50 years of age are caused by APS with 2.5% prevalence for multi-infarct dementia in APS.[2] In this context, it should be noted that the authors report that 9.5% of stroke cases are under the age of 50 in Kerala,and therefore APS can be an important cause of young-onset vascular dementia, a devastating disability that greatly alters the quality of life and prospects.

APS is an autoimmune prothrombotic condition and requires one major clinical criterion (recurrent venous/arterial thromboses or multiple pregnancy morbidity) and one laboratory criterion (presence of antiphospholipid antibodies, i.e., anticardiolipin, β2-glycoprotein I (GPI), or lupus anticoagulant present on at least two occasions >12 weeks apart) for diagnosis. Primary APS denotes no underlying disease, but has the potential to evolve; secondary APS is usually related to systemic lupus erythematosus (SLE). Microangiopathic APS can have varied presentations involving the eye (retinal vascular thrombosis), skin (vasculitis and nailfold splinter hemorrhages), gastrointestinal (GI) tract (bowel ischemia), and cartilage or bone (hearing loss or osteonecrosis). A wide spectrum of neurological features has been described in APS,

which includes transient ischemic attacks and strokes, epilepsy, chorea, psychiatric features, multiple sclerosis-like lesions on imaging, dementia, and overlap with ischemic stroke inSneddon's syndrome with severe dementia.

Microinfarcts in APS occur in the strategic areas that possibly lead to cognitive decline or dementia and modern imaging techniques also show metabolic impairments that correlate to progressive dementia with the presence of antiphospholipid antibodies.[3] A significant association between cognitive deficits and the presence of livedo reticularis and white matter lesions on magnetic resonance imaging support the hypothesis that cerebral microvasculopathy may be the underlying mechanism for cognitive dysfunction.

A review of the literature from 1983 to 2003 by Gómez-Puerta and Cervera found 30 patients with dementia and APS and concluded that dementia was an unusual finding, but the disability had significant impact on the patient's activities of daily living.[4] The mean age of the patients was 49 years (range 16-79 years) and a third of patients had SLE, 63% had cortical infarcts, 30% basal ganglia infarcts, and 37% had signs of cerebral atrophy on imaging studies.

The concept of 'triple positivity' has been proposed, that is, the coexistence of lupus anticoagulant, high titer anticardiolipin antibodies, and anti-β2 GPI antibodies that pose a higher risk for thrombotic events than single or double positivity; an odds ratio (OR) of 33.3 in triple positive patients compared with 2.2 in double positives with the absence of lupus anticoagulant.[5] Pathological values for antinuclear antibodies and increased levels of antiphospholipid antibodies significantly correlate with the presence of cerebral lesions. As vascular disease still remains the most preventable cause of dementia, we should be able to devise and implement best practices, including novel research toolsto figure out better ways to prevent and ameliorate the debilitating cognitive deficits resulting from APS-induced vascular brain damage.

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