STROKE

Twist in artery linked to stroke in young adults

Dolichoectasia, a condition of unknown cause characterized by elongation, twisting and dilation of the basilar artery in old age, is common among young patients admitted for acute stroke, a new study shows. This finding highlights the need to consider vascular abnormalities as a risk factor for stroke in young adults.

Traditionally, dolichoectasia is thought to occur in old age. “When it occurs at a younger age, it has variably been associated with genetic conditions such as Fabry disease,” says Vincent Thijs, the first author of the new study. “However, in a large scale study, we could not find an association with Fabry disease. This got me interested in finding out what the risk factors are for vessel remodelling and whether the associations

found in older people also hold in younger patients.”

The study involved 3,850 patients aged 18–55 years, at 47 centres in 15 European countries. The researchers gathered MRI data about the presence of vascular abnormalities, such as distortion of the basilar artery, microbleeds, small vessel disease and cerebral white matter lesions, in the patients. Analysis of these data showed that dolichoectasia was present in 13% of patients, and that these patients were more susceptible to microbleeds and small vessel disease than were patients without dolichoectasia.

Dolichoectasia is normally associated with old age, particularly in the presence of hypertension and diabetes. “However, our finding

shows that dolichoectasia is surprisingly common in younger patients after transient ischaemic attack and stroke,” says Thijs.

Furthermore, dolichoectasia was associated with hypertension, smaller infarctions and brainstem strokes, and was more common among men than women. These signs are all associated with small vessel disease, indicating that dolichoectasia can be associated with this condition in young patients, which is similar to findings routinely reported in older patients. In fact, “dolichoectasia may well share common aetiopathologies with cerebral small vessel disease.”

The group now plans to gain a better understanding of why this vascular remodelling occurs. The researchers intend to conduct whole-exome sequencing and genome-wide association studies to determine whether genetics plays a role.

Mitesh Patel

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