

these patients was found to normalize—well before any symptomatic improvement. Similar treatment given to schizophrenic patients who had already experienced several psychotic episodes did not produce the same normalizing effect.

The authors conclude that intrinsic brain-specific alterations in glucoregulatory processes occur in the CSF of patients with the first onset of schizophrenia, and that the commencement of antipsychotic treatment during a first psychotic episode could result in a more favorable outcome than if treatment is initiated after several psychotic episodes.

**Original article** Holmes E *et al.* (2006) Metabolic profiling of CSF: evidence that early intervention may impact on disease progression and outcome in schizophrenia. *PLoS Med* [doi: 10.1371/journal.pmed.0030327]

## Multiple acute ischemic lesion pattern can occur in stroke with no embolic source

A pattern of multiple acute ischemic lesions on diffusion-weighted MRI (DWI-MRI) is thought to indicate an embolic source of stroke. In some stroke patients with this lesion pattern, however, no embolic source can be detected, and the stroke is described as cryptogenic; in other patients, patent foramen ovale (PFO) is the only pathological finding that might operate as an embolic source. Jauss *et al.* compared the prevalence of the multiple acute ischemic lesion pattern in patients with cryptogenic stroke with that in patients with PFO.

The authors screened 650 patients with stroke who underwent DWI-MRI. Patients with carotid stenosis, a cardiac embolic source other than PFO, or an obvious stroke cause such as dissection or vasculitis, were excluded. Of the remaining 106 patients, 73 had lesions on DWI-MRI and were included in the analyses.

There was no significant difference in the occurrence of a multiple ischemic lesion pattern between patients with PFO and those with cryptogenic stroke for the entire group, or for the subgroup of younger stroke patients aged  $\leq 50$  years. Multiple lesions occurring in the posterior circulation were more common in patients with PFO than in patients with cryptogenic stroke (7 vs 0 patients;  $P < 0.05$ ),

but no significant differences were seen between groups in the distribution of lesions in the anterior circulation.

The authors conclude that a multiple ischemic lesion pattern limited to the posterior circulation territory is associated with PFO presence, whereas multiple ischemic lesions in general are not a specific feature of stroke patients with PFO.

**Original article** Jauss M *et al.* (2006) Embolic lesion pattern in stroke patients with patent foramen ovale compared with patients lacking an embolic source. *Stroke* 37: 2159–2161

## Increased risk of cardiovascular disease in women with migraine with aura

Women over 45 years of age who suffer from migraine with aura are at significantly higher risk of serious cardiovascular disease (CVD) than those who report no history of migraine, according to a recent study.

Kurth and co-workers performed a prospective cohort analysis of participants in the US-based Women's Health Study. Their investigation included 27,840 women aged 45 years or over, who were free from CVD and angina at study entry (1992–1995), and for whom data on self-reported migraine history and aura status, and lipid measurements were available. Overall, 5,125 (18.4%) women reported a history of migraine at baseline; 70.4% of these women had active migraine, of whom 39.7% reported aura symptoms.

Over the follow-up period (mean 10 years), 580 major CVD events were reported. Women with active migraine with aura were found to have a significantly increased risk of ischemic stroke (adjusted hazard ratio [HR] 1.91, 95% CI 1.17–3.10;  $P = 0.01$ ), myocardial infarction (HR 2.08, 95% CI 1.30–3.31;  $P = 0.002$ ), and ischemic CVD death (HR 2.33, 95% CI 1.21–4.51;  $P = 0.01$ ) compared with women with no migraine history. Women with active migraine and no aura had similar incidence rates of vascular events and angina to women without migraine history. The data from this study indicated that, following age adjustment, there were 18 additional major CVD events attributable to migraine with aura per 10,000 women per year.

**Original article** Kurth T *et al.* (2006) Migraine and risk of cardiovascular disease in women. *JAMA* 296: 283–291