Mental health

Depression associated with increased mortality risk after stroke

Stroke survivors with depression are more likely to die within five years, particularly younger patients. Those prescribed selective serotonin reuptake inhibitors (SSRIs) after their stroke appear to have a significantly increased risk of mortality, a UK cohort study has found.

Data were obtained from the South London Stroke Register. A total of 3,722 patients, registered between 1998 and 2012 and followed up till the end of June 2013, were recruited to the study. Three months after their stroke, 1,354 survivors were screened for depression using the Hospital Anxiety and Depression Scale (HADS). The outcome measure was all cause mortality within five years of the stroke.

Depression, defined as a HADS depression score > 7, was diagnosed in 435 survivors (32.1%), of whom 331 died within five years.

Depressed survivors had a significantly increased risk of death, HR 1.41 (95% CI:1.13-1.77; P = 0.002) adjusted for age, sex, ethnicity and stroke severity, which remained after further adjustment for a number of potential medical and lifestyle confounders.

The association between depression and mortality was stronger in patients who were less than 65 years old.

Patients who were started on an SSRI after their stroke were significantly more likely to die, HR 1.72 (95% CI:1.34-2.20; P < 0.001), and this association was independent of depression at three months.

HADS is a screening not a diagnostic tool. It was designed to be used in medically ill patients and excludes somatic symptoms as these may be caused by physical illness rather than depression. Nevertheless, some changes may occur as a result of the stroke itself (e.g. patients with language or cognitive problems may no longer be able to enjoy a good book). A recent review did not consider HADS to be the best tool for identifying depression in stroke patients.[1]

The significance of the association between SSRI use and mortality is unclear. Patients taking SSRIs at the time of their stroke did not have an increased mortality risk which would suggest that the association with post-stroke SSRI use is not due to a direct causal effect. However, other studies have shown that SSRIs are associated with an increased risk of brain haemorrhage, although the absolute risk is thought to be low.[2]

A large UK cohort study of patients aged 65 and over found that, when compared with tricyclics, SSRIs were associated with significantly higher rates of all cause mortality, stroke, falls, fracture, epilepsy and hyponatraemia.[3] A case can be made for lofepramine as the antidepressant of choice in elderly patients.

A systematic review concluded that approximately one third of stroke patients experience significant depressive symptoms at some point during their recovery.[4]

NICE recommends that all stroke patients should be screened for mood disturbance within six weeks of diagnosis.[5]

A recent NHS guide to improving psychological care of stroke patients recommends that patients should be assessed on at least three occasions (one, three and six months after the stroke).[6]

It is unclear how these patients should be treated. NICE recommends low intensity psychosocial interventions for those with subthreshold symptoms or mild depression, high intensity psychotherapy for those with moderate depression and combination treatment (antidepressants plus individual CBT) for those with severe depression.[7] However, talking therapies may be unsuitable for stroke patients, particularly the 40% of survivors who have aphasia.[8]

A Cochrane review found no evidence that psychotherapy was effective whereas antidepressants did have a small but significant effect.[9]

The present study suggests that we should be wary of prescribing SSRIs to patients with post-stroke depression. I would suggest that they should only be offered when:

- Depression is of at least moderate severity
- High intensity psychotherapy is unavailable, unsuitable or declined
- Patients have been fully informed of the potential risks.

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● **Ayerbe L, Ayis S, Crichton SL et al. Explanatory factors for the increased mortality of stroke patients with depression. *Neurology* 2014;83:2007-12**

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