

## Some antidepressants linked to *Clostridium difficile* infection

Certain types of antidepressants have been linked to an increase in the risk of *Clostridium difficile* infection finds a study in *BMC Medicine* (Rogers et al, 2013). Awareness of this link should improve identification and early treatment of *C. difficile* infection.

*C. difficile* infection is one of the most common hospital-acquired infections, causing more than 7000 deaths each year in the USA. Several types of medications are thought to increase risk of *C. difficile* infection, including antidepressants, and a team from the University of Michigan investigated the exact nature of this risk.

They studied *C. difficile* infection in people with and without depression and found that people with major depression had a much higher chance of *C. difficile* infection (a 36% increase) than people without depression. This association held for a variety of depressive disorders and nervous or psychiatric problems.

Age and family support also affected the risk of *C. difficile* infection. Older, widowed Americans were 54% more likely to catch *C. difficile* than their married peers. Just living alone increased risk by 25%.

They then looked to see if there was an association

between antidepressant medication and hospital-acquired *C. difficile* infection. Use of most types of antidepressants did not affect *C. difficile* infection risk – of the twelve drugs tested only mirtazapine and fluoxetine increased risk of *C. difficile* infection, in each case the risk was doubled.

The researchers stress that it is not yet known whether the increase in *C. difficile* infection is caused by microbial changes in the gut during depression or to the medications associated with depression.

Dr Mary Rogers, who led this study, explained: ‘Depression is common worldwide. We have

long known that depression is associated with changes in the gastrointestinal system. The interaction between the brain and the gut, called the “brain–gut axis” is fascinating and deserves more study.’

She continued: ‘Our finding of a link between depression and *C. difficile* should help us better identify those at risk of infection and, perhaps, encourage exploration of the underlying brain–gut mechanisms involved.’

Rogers MA, Greene MT, Young VB, Saint S, Langa KM, Kao JY, Aronoff DM (2013) Depression, antidepressant medications, and risk of *Clostridium difficile* infection. *BMC Medicine* 11: 121

### Reducing risk of major disability in intracerebral haemorrhage

A new study, which involved more than 2800 patients from 140 hospitals around the world, found that intensive blood pressure lowering in patients with intracerebral haemorrhage, the most serious type of stroke, reduced the risk of major disability and improved chances of recovery by as much as 20% (Anderson et al, 2013).

Professor Thompson Robinson, Deputy Head, Department of Cardiovascular Sciences, University of Leicester, Leicester



Professor Thompson Robinson, Deputy Head of the Department of Cardiovascular Sciences, University of Leicester, was the UK coordinator for the study. He said: ‘The results of the study show that intensively reducing high blood pressure within 6 hours of onset of a bleeding-related stroke is safe, and results in a significant shift from being dead and dependent to being alive and independent after stroke.’

He emphasized: ‘Because it involves treatment with already available blood pressure-lowering treatments, the results should be easy to implement in all hospitals and be of benefit to patients.’

Anderson CS, Heeley E, Huang Y et al (2013) Rapid blood-pressure lowering in patients with acute intracerebral hemorrhage. *N Engl J Med* 29 May (Epub before print)

### Depression common in children with temporal lobe epilepsy

A new study determined that children and adolescents with seizures involving the temporal lobe are likely to have clinically significant behavioural problems and psychiatric illness, especially depression (Salpekar et al, 2013).

Research from the Children’s National Medical Center in Washington, D.C highlights the importance of routine psychiatric evaluation for paediatric epilepsy patients – particularly those who do not respond to anti-seizure medications and require epilepsy surgery.

Researchers reviewed case records for 40 children between the ages of 6 and 17 years, who did not respond to anti-seizure medications. Patients were given pre-surgical psychiatric evaluations and their parents completed the Child Behavioral Checklist. The seizure location and suitability for surgi-

cal procedures were confirmed by epilepsy specialists.

The investigators found that these patients had psychiatric and behavioural problems well beyond what is typically reported in children with chronic epilepsy. Nearly 80% of participants had significant psychiatric symptoms – far greater than the 20–40% prevalence of mental illness generally found in chronic paediatric epilepsy.

Furthermore, children with seizures suspected to be localized in the temporal lobe were more likely to have depression symptoms and more significant behavioural issues reported by parents compared to children with seizures in other brain regions.

Salpekar JA, Berl MM, Havens K et al (2013) Psychiatric symptoms in children prior to epilepsy surgery differ according to suspected seizure focus. *Epilepsia* 10 May (Epub before print)