Depression, antidepressant medications, and risk of Clostridium difficile infection

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Abstract

Background

An ancillary finding in previous research has suggested that the use of antidepressant medications increases the risk of developing Clostridium difficile infection (CDI). Our objective was to evaluate whether depression or the use of anti-depressants altered the risk of developing CDI, using two distinct datasets and study designs.

Methods

In Study 1, we conducted a longitudinal investigation of a nationally representative sample of older people (in the US) (n=16,781), linking data from biennial interviews to physician and emergency department visits, stays in hospital and skilled nursing facilities, home health visits,
and other outpatient visits. In Study 2, we completed a clinical investigation of hospitalized adults who were tested for C. difficile (n = 4047), with cases testing positive and controls testing negative. Antidepressant medication use prior to testing was ascertained.

Results

The population-based rate of CDI in older people (in the US) was 282.9/100,000 person-years (95% confidence interval (CI)) 226.3 to 339.5) for individuals with depression and 197.1/100,000 person-years for those without depression (95% CI 168.0 to 226.1). The odds of CDI were 36% greater in persons with major depression (95% CI 1.06 to 1.74), 35% greater in individuals with depressive disorders (95% CI 1.05 to 1.73), 54% greater in those who were widowed (95% CI 1.21 to 1.95), and 25% lower in adults who did not live alone (95% CI 0.62 to 0.92). Self-reports of feeling sad or having emotional, nervous or psychiatric problems at baseline were also associated with the later development of CDI. Use of certain antidepressant medications during hospitalization was associated with altered risk of CDI.

Conclusions

Adults with depression and who take specific anti-depressants seem to be more likely to develop CDI.

Sources

Antidepressants - risk of gut infection

Written by NHA
Sunday, 04 August 2013 11:49 -

Published: 7 May 2013