The risk of developing depression with previously diagnosed influenza infections

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BACKGROUND

Previous evidence suggests that systemic infections may exert neuronal damage and thereby increase the risk of developing depression.

OBJECTIVES

To explore the association between previously diagnosed influenza infections and the risk of developing depression.

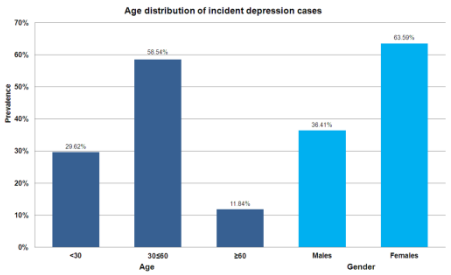
METHODS

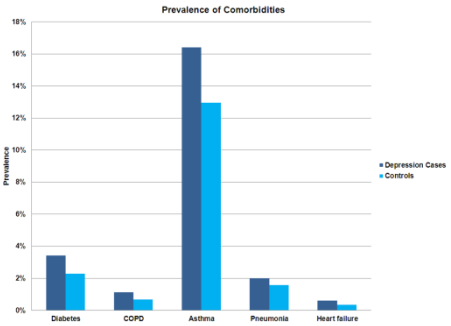
- Population-based case-control analysis
- Study-base: about six million people in the UK using the General Practice Research Database (GPRD)
- Cases were people < 80 years with an incident diagnosis of depression between 2000-2009
- Each case was matched with one control on age, gender, calendar time, general practice, and number of years of active history in the GPRD prior to the index date
- Exposure of interest: number and timing of previous influenza infections
- Contribution of various potential confounders including chronic obstructive pulmonary disease (COPD), asthma, diabetes mellitus, pneumonia, heart failure and immunosuppressive therapy was evaluated in univariate models
- Final results were adjusted for BMI, smoking, COPD, asthma, pneumonia, diabetes, heart failure, use of systemic or inhalative steroids, immunosuppressants and influenza vaccination

RESULTS

We identified a total of 72'969 cases with incident depression and the same numbers of matched controls

- Mean age of cases and controls at the index date is 39.1 years (SD ± 15.43)

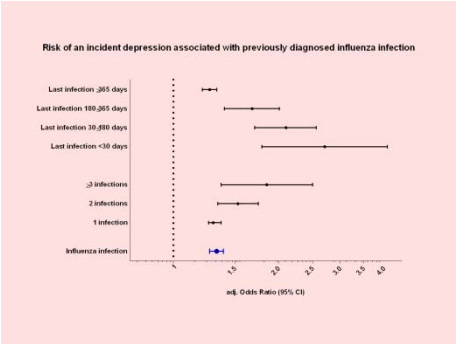




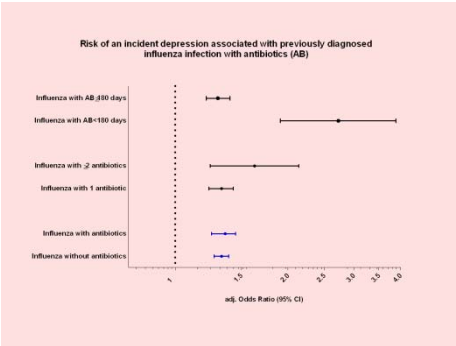
- Relative risks of incident depression for patients with 1, 2 or 3+ previously recorded influenza infections were 1.30 (95% C 1.26-1.37), 1.53 (95% CI 1.34-1.75) and 1.85 (95% CI 1.37-2.50)

RESULTS (cont.)

- Infection recorded within one month prior to the index date increased the risk to an OR of 2.71 (95% CI 1.79-4.09)



- A «severe» flu with use of antibiotics increased the risk of incident depression to an OR of 1.36 (95% CI 1.25-1.45)
- A flu with antibiotic use within 180 days prior to the index date increased the risk to an OR of 2.73 (95% CI 1.91-3.89)



CONCLUSIONS

In this large study population, previous influenza infections were associated with an increased risk of an incident depression diagnosis.

CONFLICT OF INTEREST STATEMENT:

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