Adding aspirin to antipsychotics reduces psychopathology in adults with schizophrenia spectrum disorders

**QUESTION**

**Question:** Does adjuvant aspirin benefit patients with schizophrenia spectrum disorders who are on antipsychotic therapy?

**Patients:** 70 adults (18–55 years of age) with DSM-IV schizophrenia spectrum disorder (schizophrenia, schizoaffective disorder or schizophreniform disorder), who were at least moderately ill (score ≥60 on the Positive and Negative Syndrome Scale, PANSS, with score ≥4 on two items). There was a 2-week placebo run-in period, and only those who achieved over 80% compliance were randomised. Exclusion criteria: illness duration longer than 10 years (changed from 5 years because of slow recruitment), contraindications for aspirin or pantoprazole, significant somatic illness, chronic non-steroidal anti-inflammatory drug use, corticosteroid use, pregnancy or change in type or dose of antipsychotic drugs in the previous 2 weeks.

**Setting:** 10 psychiatric hospitals in The Netherlands; May 2004 to August 2007.

**Intervention:** Adjuvant aspirin (1000 mg daily) or placebo (adjuvant to antipsychotic medication). All participants received pantoprazole 40 mg daily for gastric protection.

**Outcomes:** Psychopathology (PANSS total, positive, negative and general psychopathology scores).

**Patient follow-up:** 83%.

**METHODS**

**Design:** Randomised controlled trial.

**Allocation:** Unclear.

**Blinding:** Double blind.

**Follow-up period:** 3 months.

**MAIN RESULTS**

Adjuvant aspirin reduced overall psychopathology compared with placebo in mixed effect models at 3 months (change in mean total PANSS score in last observation carried forward (LOCF) analyses: −9.27 with aspirin vs −5.46 with placebo, difference in unpaired t tests: +3.81, 95% CI −1.10 to +8.73; difference based on linear mixed model: 4.86, 95% CI 0.91 to 8.80; effect size 0.47). There was also a reduction in positive symptoms with adjuvant aspirin compared with placebo in mixed effect models (change in mean total PANSS positive subscale score in LOCF analyses: −2.24 with aspirin vs −1.32 with placebo, difference in unpaired t tests: +0.92, 95% CI −0.98 to +2.82; difference based on linear mixed model: 1.57, 95% CI 0.06 to 3.07; effect size 0.39). The mixed model did not show differences in negative or general PANSS subscale scores between aspirin and placebo. Aspirin had a greater effect on overall psychopathology in individuals with more altered immune function (ie, lower T_1H/TH2 ratios; p=0.015; Aspirin significantly reduced overall psychopathology in individuals with the lowest T_1H/TH2 ratios (difference in PANSS total score: 7.47, 95% CI 1.97 to 12.98) but not in those with the highest T_1H/TH2 ratios (difference in PANSS total score: +2.59, 95% CI −3.50 to +8.28).

**CONCLUSIONS**

Adding aspirin to antipsychotic treatment reduces the symptoms of schizophrenia spectrum disorders more than adding placebo.

**NOTES**

Randomisation was stratified based on psychiatric centre (referral or non-referral) and relative T_1H/TH2 cytokine activity (median interferon γ/interleukin 4 ratio).

**ABSTRACTED FROM**


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