

Publication

Adverse events profile of oral corticosteroids among asthma patients in the UK: cohort study with a nested case-control analysis

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To evaluate the adverse events profile of oral prednisolone among adult asthma patients in the UK.; Using data from the UK-based Clinical Practice Research Datalink, we conducted a series of cohort studies to quantify incidence rates and incidence rate ratios, and a series of nested case-control analyses to estimate crude and adjusted odds ratios, of 11 different potential corticosteroid-related adverse events (bone-related conditions, hypertension, peptic ulcer, severe infections, herpes zoster, diabetes mellitus type 2, cataract, glaucoma, chronic kidney disease, affective disorders, and cardiovascular events).; Between 165,900 and 269,368 asthma patients were included in each of the 11 cohorts, of whom between 836 and 16,192 developed an outcome of interest. Incidence rates per 1000 person-years of potential corticosteroid-related adverse events in patients with new current use of oral prednisolone ranged from 1.4 (95% confidence interval [CI], 1.0-1.8) for peptic ulcer to 78.0 (95% CI, 74.8-81.2) for severe infections. After adjusting for confounding, current oral prednisolone use was most strongly associated with an increased risk of severe infection, compared with non-use of prednisolone; OR 2.16 (95% CI, 2.05-2.27). There were smaller elevated risks of peptic ulcer, affective disorders, and cataract at higher doses, and marginally increased risks of herpes zoster, cardiovascular events, diabetes mellitus type 2, and bone related conditions, compared with non-use of prednisolone. We did not observe an association between oral prednisolone use and glaucoma, chronic kidney disease, or hypertension.; Oral prednisolone use is associated with infections, gastrointestinal, neuropsychiatric, ocular, cardiovascular, metabolic, and bone-related complications among adult asthma patients.

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