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CLINICAL CHARACTERISTICS AND MANAGEMENT OF DUAL ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) DIAGNOSIS IN PRIMARY CARE; RESULTS FROM THE WELSH NATIONAL COPD PRIMARY CARE AUDIT

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Introduction Asthma and COPD are two common conditions that are diagnosed and managed in primary care. However, it is currently unknown whether patients with a dual diagnosis of asthma and COPD differ from patients with COPD alone, based on UK general practice records. We sought to evaluate the clinical characteristics and management in primary care of patients with a dual diagnosis of asthma and COPD, compared to those with COPD alone, using data from the first Welsh national COPD primary care audit.

Methods The Welsh national COPD primary care audit prospectively collected data of patients registered with COPD from 61% of GP practices in Wales covering January 2014–March 2015. This analysis compared 5682 patients with a current co-diagnosis of asthma to 42 301 patients with COPD alone.

Results There were no significant differences in age (71 ± 12 years for both), body mass index (27.54 ± 6.40 vs 27.42 ± 6.32 kg/m²), gender (48% vs 47% female), or smoking status (33.1% vs 33.8% current smoker) between patients with a co-diagnosis of asthma vs patients with COPD alone, respectively. Spirometry, exacerbation frequency and reported breathlessness were also similar [(FEV₁: 1.49 ± 0.64 vs 1.50 ± 0.63 litres, $p=0.65$), (exacerbations: 7.36 ± 8.41 vs 7.24 ± 8.73 , $p=0.36$), (MRC: 2.62 ± 1.02 vs 2.59 ± 1.01 , $p=0.10$)]. However, patients with a co-diagnosis of asthma compared to COPD alone, were less likely to receive influenza vaccination (80.2% vs 81.4%, $p<0.001$), pulmonary rehabilitation (15.9% vs 18.9%, $p<0.001$), 3–6 month review (1.6% vs 2.6%, $p<0.001$) or smoking cessation (67.2% vs 68.4%, $p=0.07$), but were more likely to receive pharmacology therapies: long acting beta agonist (LABA): 28.8% vs 25.8%, $p<0.001$, inhaled corticosteroids (ICS): 51.7% vs 48.2%, $p<0.001$, long acting muscarinic antagonist: 69% vs 65.8%, $p<0.001$, and combined LABA/ICS inhaler: 70.6% vs 68.5%, $p<0.001$.

Conclusions Patients with a dual diagnosis of asthma and COPD compared to patients with COPD alone, received less non-pharmacological COPD management in primary care, despite being on more inhaled medication and having similar levels of COPD severity. These are clinically important data from the Welsh national COPD primary care audit and suggest that quality improvement actions focused on COPD care

for patients with a dual diagnosis of asthma and COPD are required.

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RISK OF STROKE ASSOCIATED WITH ACUTE EXACERBATIONS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD): A SELF-CONTROLLED CASE SERIES

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Introduction and Objectives Chronic Obstructive Pulmonary Disease (COPD) patients are at increased risk of cardiovascular disease. Previous studies have suggested that acute exacerbations of COPD (AECOPD) are associated with an increased risk of stroke in COPD patients. We aimed to characterise the size and duration of the increased risk of stroke following AECOPD as well as factors that modify the risk.

Methods Using data from the Clinical Practice Research Data-link linked with Hospital Episode Statistics, we conducted a self-controlled case series on COPD patients who had an AECOPD and a stroke. Fixed-effects conditional Poisson regression was utilised to estimate the incidence rate ratio (IRR) of stroke in the 91 day period following AECOPD compared with stable periods. The 91 day period was also segmented into shorter time periods, which were compared with stable periods in order to determine how the risk of stroke post-AECOPD changes over time. We stratified by various factors (including AECOPD severity, exacerbation frequency, cardiovascular disease history, and cardiovascular and respiratory drug prescription) to identify which modified this risk.

Results 3,466 COPD patients were identified as having at least one AECOPD and a first stroke during the study period. We observed an increased risk of stroke in the 91 day period following AECOPD compared with stable periods (IRR=1.47, 95% CI: 1.36–1.59), which peaked on days 4–7 (IRR=1.93, 95% CI: 1.57–2.37), not returning to baseline until after 91 days post-AECOPD. This increased risk was observed for ischaemic strokes only (IRR=1.51, 95% CI: 1.39–1.65). The relative risk of ischaemic stroke post-AECOPD was significantly higher for those with lower exacerbation frequency, and significantly lower for aspirin users and those with a previous angina diagnosis.

Conclusions There is a 1.47-fold increased risk of stroke in the 91 days following AECOPD which peaks on days 4–7 and does not return to baseline until after 91 days post-AECOPD. This may be used to inform physicians when their patients are at greatest risk of stroke following AECOPD and may provide the basis of future interventions such as the introduction of aspirin to reduce this risk and possibly reduce mortality in COPD patients.