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| **Retrospective Audit of Tertiary Hospital Emergency Department Management of Acute Severe Asthma** |
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| **Introduction/Aim:** Optimal management of acute asthma in the Emergency Department (ED) is uncertain. More data are required from Australian centres to identify areas where management can be improved. The aim of this study is to describe the assessment, treatment and disposition of patients with acute asthma presenting to Royal North Shore Hospital’s (RNSH) ED.**Methods:** Medical records of patients with a primary diagnosis of asthma presenting to RNSH between January to June 2023 were analysed as a retrospective audit. The clinical characteristics, investigations, treatment and outcomes of patients in the ED were analysed with summary statistics and correlation analyses.**Results:** The 67 patients in this study had median age of 38 years (IQR 24-58) and were predominantly female (65.7%). Majority of patients (89.6%) had previous diagnoses of asthma but only 61.7% were on a regular preventer (preventer compliance was not documented in 86.5%). Approximately 55.2% identified as non-smokers but 26.9% did not have smoking history obtained. Impression of clinical severity (accessory muscle use, ability to speak and global impression) was not documented in 89.6% and lung function testing was not performed in any patients. Of those reassessed after initial inhaled salbutamol dose of 4800µg, (IQR 1800-7200), 65.1% were assessed as clinically improved. Median time to corticosteroid was 145 minutes**,** (IQR 85-223). Median total dose of inhaled salbutamol provided over ED stay was 9600 µg, (IQR 3900-15300). Median length of ED stay was 6 hours (IQR 4-9). Only 3.0% of patients had inhaler technique checked. Of the 43 (64.2%) patients discharged from ED, 14.3% received an asthma action plan with 35.8% prescribed ongoing oral corticosteroids. **Conclusion:** The time to receiving systemic corticosteroids, checking of inhaler technique, better documentation of severity, standardisation of severity assessment, provision of written asthma action plans and instructions for systemic steroid use post discharge, could all be improved. This is relevant to other Australian EDs and is consistent with published global data. Nationally standardised principles of management may be useful in guiding local management pathways and ongoing education in ED. Data collection will be completed for previous years to examine possible changes in ED management. **Grant Support: Nil** |