Is there a relationship between asthma severity and abnormalities on chest X-ray?: a pilot study

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Objectives: To determine the rate of chest X-ray (CXR) ordering for patients with acute asthma in the emergency department (ED) and the rate of relevant abnormalities on CXR for each asthma severity classification. Methods: Retrospective explicit chart review involving adult ED patients with asthma presenting between 1 July and 31 December 2001. Data collected included severity classification according to the National Asthma Guidelines (NAG) [Australia], demographic information, temperature, white cell count, CXR ordering and findings on CXR. The main outcomes were the rate of CXR ordering and the rate of relevant abnormality on CXR by severity category. Results: Altogether, 158 presentations by 140 patients were analysed. The overall rate of CXR ordering was 68% [mild 54%, moderate 66%, severe 84%]. The overall rate of abnormalities was 8% [mild 0%, moderate 9%, severe 14%]. Ninety-one percent of patients admitted to hospital had CXR of which 13% [8/60] revealed significant abnormalities. Conclusion: The rate of CXR ordering in acute asthma was high with a low yield of relevant positive findings in the mild and moderate severity classes. This was at odds with NAG recommendation. Our results suggest that routine CXR may be warranted in patients with severe asthma but should be guided by clinical examination in other severity classes. (Hong Kong j.emerg.med. 2004;11:147-151)

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