



LETTERS

EPIDEMIC THUNDERSTORM ASTHMA

Thunderstorm asthma: controlling (deadly) grass pollen allergy

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Andrew and colleagues examine the ambulance responses in the catastrophic epidemic thunderstorm asthma event in Melbourne in 2016.¹ Beyond preparing emergency services, we need public health responses, including forecasting and control of known asthma, to prevent the acute consequences of thunderstorm asthma.

Further proactive measures to identify and pre-emptively protect susceptible people are critical to mitigating the effects of thunderstorm asthma. Patients with current asthma should obviously be offered preventive inhaled corticosteroids according to guideline recommendations. But in Melbourne, and in previous episodes of epidemic thunderstorm asthma, known previous asthma was an inadequate predictor of risk.^{1,2} Seasonal allergic rhinitis (hay fever) from grass pollen allergy, on the other hand, was almost universal among affected patients and is clearly the most sensitive marker of risk.^{2,3}

Among patients with hay fever, risk can be further stratified using the degree of sensitisation to grass pollen. Quantitative measurement of wheal size and specific serum IgE concentrations in response to grass pollen might identify patients at higher risk of thunderstorm asthma,^{4,5} as may the degree of airway inflammation indicated by exhaled nitric oxide.⁶ Molecular component resolved diagnosis may also enhance identification of people vulnerable to thunderstorm asthma. Under the weather conditions of epidemic thunderstorm asthma, grass pollen grains rupture to release ryegrass group 5 allergen (Lol p 5) in pollen starch granules that are small enough to be respired and penetrate deeply into the lower airways.^{4,7} Measurement of specific IgE to key locally relevant pollen allergen components (including ryegrass group 5 allergen) could predict manifestation and severity of thunderstorm asthma.³ Clinicians and patients should stop considering treatment for allergic rhinitis to be an optional extra; the condition has proven itself deadly.¹ People identified to be at risk of thunderstorm asthma should have their treatment for allergic rhinitis optimised

with nasal corticosteroids and preventive allergen specific immunotherapy for grass pollen allergy.⁸

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Full response at: <http://www.bmj.com/content/359/bmj.j5636/rr-0>.

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