Severe asthma: implementing game-changing science

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New assessment and treatment opportunities for people with severe asthma promise better outcomes

“...it’s been a long time coming, but I feel great now.” “I feel like I’ve got my life back.” These are statements made by patients with severe asthma who have had positive responses to targeted monoclonal antibody therapy for asthma. Both patients have severe refractory eosinophilic asthma and have experienced many years of persistent symptoms despite daily maintenance prednisone. On monoclonal antibody therapy, they achieved complete symptom control and significant prednisone reduction.

The experience of these patients sets the scene for what is looking like a game changer in severe asthma management. Specific monoclonal antibody therapies that target the interleukin-5 driven eosinophilic pathway or immunoglobulin E-mediated allergic pathways lead to disease control in patients with the most severe form of the disease, one that is refractory to current treatment.1

Asthma is very common in Australia, and the at-risk population is massive, as the recent Melbourne thunderstorm asthma epidemic has shown.2 Numerically, severe asthma represents only a small part of asthma, perhaps between 1% and 3% of all people with asthma. But its impact is great, causing a significant quality of life and economic burden to people with the disease and to our community.3 Over 60% of the asthma health care spend is on severe asthma, and per patient costs are more than for type 2 diabetes, chronic obstructive pulmonary disease or stroke.4

The assessment of people with severe asthma is complex and requires cooperation and coordination between several disciplines. This is because of the need to assess and optimise patients’ self-management skills, the need to manage the comorbid diseases that frequently occur with severe asthma and that may confound assessment of severe asthma, and the need for objective testing to establish the diagnosis and identify a specific patient phenotype. All of these boxes must be ticked in order to get the right treatment for the right patient.

How well equipped are we to meet the needs of these patients? Well, we are getting there. We know what needs to be done,6 and we have some examples of how to implement this in different health care settings.6-8 However, we still have a long way to go, and these examples are best viewed as demonstration projects that have emerged as clinicians have tried to find ways to introduce a new management approach within the constraints of existing practice.

It is likely that some Australians with severe asthma are missing out on effective therapy. But we can’t put a figure on this because we don’t know how many people in Australia have severe asthma. Knowing this would also aid in the workforce planning that is needed to manage the problem of severe asthma. Based on overseas estimates applied to the Australian population, the number of people with severe asthma could be as few as 2800 (as calculated in the United Kingdom),9 or as many as 82 000 (based on overseas population studies of severe asthma prevalence).10,11

There is a need to improve knowledge and skills among practitioners and patients at all levels. New resources and training opportunities have been developed by the Centre for Excellence in Severe Asthma (https://toolkit.severeasthma.org.au), the Thoracic Society of Australia and New Zealand (https://www.thoracic.org.au) and Asthma Australia (https://www.asthmaaustralia.org.au). Effective new drugs are now accessible in Australia through the Pharmaceutical Benefits Scheme. Sustaining these resources and extending their reach is now necessary.

A big gap exists in the actual delivery of multidisciplinary and coordinated care to people with severe asthma. What is the best model of care for severe asthma in Australia?9 The UK has opted for quarantining part of its National Health Service budget for specialised services, and has commissioned designated centres that are accredited to deliver severe asthma services.9,12 Is this the best approach for Australia? How would it meet the needs of people in rural and remote settings? There are real opportunities here to use implementation science methodologies to translate the life-changing treatments we now have for severe asthma into practice and policy changes that will benefit people with severe asthma and our community.

When I started practice in this area, my patients would complain that the only treatment I could offer was oral corticosteroids, and that my treatment “made them fat”! We are now entering a new era in severe asthma management where there are real prospects of disease control for many people using safer and more accessible drugs. Our challenge now is to implement this in a way that offers the maximum benefit to people with severe asthma.
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