

In Memorium

Dr Andre Marais, our good friend and colleague who sits on the SAGP editorial board, passed away suddenly on 13 June 2020. Our deepest sympathies go out to his wife, son and daughter, friends and family. We will miss him. This issue of SAGP is dedicated to his memory.

EDITORIAL

Waiting to exhale: COVID-19, asthma and COPD

"Each time we exhale, the world ends; when we inhale, there can be, if we allow it, rebirth and spiritual renewal..." Tom Robbins

As the COVID-19 cases and deaths continue their inexorable rise in South Africa, winter sets in and lockdown measures are eased, we wait – with bated breath – for the crisis to peak. The uncertainty is difficult to navigate. We feel compelled to observe and appreciate every in- and exhalation, and in this way, find ourselves reflecting on other respiratory ills. Asthma and chronic obstructive pulmonary disease (COPD), like severe COVID-19, are characterised by a struggle to breathe. Exacerbations may prove fatal. Unlike COVID-19, asthma and COPD cause obstructed airflow from the lungs, and may be managed pharmacologically. It follows that in order to breathe in, one has to breathe out, and treatments are therefore aimed at easing obstructions by targeting inflammation and bronchoconstriction.

Any respiratory tract infection may trigger an asthma attack or loss of asthma control, and the Centres for Disease Control and Prevention (CDC) warn of potentially increased susceptibility to severe SARS-CoV-2 infection in moderate to severe asthmatics.¹ Early data shows that this risk does not appear to be realised in well-controlled patients.²⁻⁴ Interestingly, in New York, the epicentre in the USA, asthmatics are thought to be underrepresented in the COVID-19 population, accounting for 5% of deaths.⁵ In addition, a small study has shown an increased risk of COVID-19-related hospitalisation, but not death.⁶ Optimising asthma control is crucial, now more than ever.

The Global Initiative for Asthma (GINA) guidelines were updated last year, and the most striking change was that short-acting beta agonist (SABA) bronchodilators such as salbutamol, are no longer recommended as sole relievers for mild asthma attacks in adults and adolescents because they increase the likelihood of severe exacerbations.⁷ The addition of any low-dose inhaled corticosteroid (ICS) such as budesonide, beclomethasone, or fluticasone, significantly reduces this risk.

However, GINA recommends as needed reliever treatment with ICS plus formoterol, which is a long-acting beta 2 agonist (LABA) for steps 1 and 2 mild asthma, as well as for steps 3 to 5 if the controller medication is also ICS-formoterol. If in the latter steps,

controller LABA is not formoterol, then a SABA may act as the reliever. Formoterol is favoured because its onset of action is as rapid as a SABA, but its bronchodilating effects are long lasting.⁷

Controller medication is used to prevent exacerbations and control symptoms. Low-dose ICS-formoterol is the preferred option in steps 1 (symptoms less than twice a month) and 2 (symptoms twice a month or more, but less than daily), where it is taken either as needed or daily. Low, medium and high doses of ICS-LABA are recommended for steps 3 (symptoms most days, or waking with asthma once a week or more), 4 (symptoms most days, or waking with asthma once a week or more, plus reduced lung function) and 5 (severe asthma), respectively.⁷ Besides formoterol, LABAs include salmeterol and albuterol. Alternative controller options include a daily or add-on leukotriene receptor antagonist (LRTA). Noteworthy is that the FDA issued a boxed warning for montelukast in March 2020 because of the risks of serious neuropsychiatric events, including suicide thoughts and actions.^{8,9}

Asthmatics are advised to continue their inhaled medications during the viral pandemic. Rarely, a short course of oral corticosteroids (OCS) may be required. GINA also highlights that patients with severe asthma occasionally need long-term treatment with OCS in addition to their inhaled medication. In step 5 where patients are at risk of severe attacks, OCS should be continued at the lowest possible dose, and biologics should be used in eligible severe asthma patients, so that their need for OCS is curtailed as much as possible.⁷

To reduce the risk of spreading COVID-19 to other patients and to healthcare workers, nebulisers should be avoided for acute attacks. Rather, pressurised metered dose inhaler via a spacer is preferred for severe asthma exacerbations, and sharing these is clearly dissuaded. Maintenance inhaled asthma treatments are to be continued both at home and in hospital if a patient is receiving treatment for a severe acute attack. Also, to reduce the risk of SARS-CoV-2 transmission, routine spirometry should be avoided, although if essential, infection control measures are important.⁷ In addition, the Allergy Foundation of South Africa advises the flu' vaccination.

Meanwhile, guidelines on the pharmacological management of chronic obstructive pulmonary disease (COPD) were recently issued by The American Thoracic Society.¹⁰ The salient points include a strong recommendation for dual LABA plus long-acting muscarinic antagonist (LAMA) such as tiotropium therapy, for COPD patients with dyspnoea or exercise intolerance.¹¹ Conditional or softer recommendations include adding ICS if patients had a COPD exacerbation that required antibiotics, OCS or hospitalisation in the preceding year. The ICS component of this triple therapy should be discontinued if there were no exacerbations in the prior year. Maintenance OCS is not advised.¹⁰

Like asthmatics, COPD patients should aim for excellent control at this time. Their risks for severe COVID-19 and death are increased, particularly as they are represented by an older demographic.¹² The Global Initiative for Chronic Obstructive Lung Disease (GOLD) advises patients to follow social distancing or other local public health measures in order to reduce their risk of SARS-CoV-2 exposure and infection, and to know how to seek medical help should they display symptoms of COVID-19. GOLD has not found evidence to support stopping corticosteroids, either ICS or OCS. Rather patients should continue their usual therapy, and receive oxygen therapy where needed in order to alleviate their breathlessness and help them to exhale.¹³

Kim Outhoff

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