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Stepped Approach in Asthma Management

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The [Australian Asthma Handbook](#) recommends a stepped approach for the effective management of asthma. Asthma can be well controlled with an appropriate management plan, however it continues to be a serious condition. In 2013, there were 389 deaths attributed to asthma in Australia.

Asthma is usually diagnosed when patients experience symptoms such as wheezing or shortness of breath. Spirometry is recommended to confirm the diagnosis and a treatment plan can then commence. This is usually initiated in the general practitioner's room after a thorough evaluation of the patient's risk factors and recent level of symptom control. After establishing a maintenance dose sufficient to control asthma symptoms, the patient should be reviewed in a further four to eight weeks.

All patients who have symptoms responsive to short-acting beta2 agonists (SABA) should utilise a salbutamol metered dose inhaler (MDI) as a symptom reliever. Patients with good control can remain on salbutamol and low dose inhaled corticosteroid. Good control is defined as experiencing daytime symptoms less than two days per week which are rapidly relieved by a SABA, no lifestyle disruptions, and no nocturnal symptoms.

Patients who experience symptoms more frequently should step up to the next level. The guidelines recommend the introduction of a low to medium dose of inhaled corticosteroid as a preventer. This should be delivered in a separate device to the reliever and may include budesonide, fluticasone propionate, ciclesonide, or beclomethasone dipropionate. Doctors and patients should have a discussion about management goals: reducing symptoms, flare-ups, the impact on quality of life, and any other objectives that might be relevant.

If symptoms are not controlled with low dose inhaled corticosteroids, adherence and technique should be reviewed. It is worth noting that up to 90% of patients use an incorrect technique with their inhaler devices. If inhaler technique and adherence appears good, the patient should step up to the next level. This involves an inhaled corticosteroid and long-acting beta2 agonist (LABA) combination. The handbook recommends low dose budesonide and eformoterol combination in a dry-powder inhaler or MDI. Fluticasone propionate, in combination with either salmeterol or eformoterol, are also options.

If patients are not stabilised on the above combination of medications, a higher dose preventer will be required. Patients may use a higher strength combination, or simply increase the number of inhalations used. Inhaler technique and compliance should be reassessed at each review. It should also be confirmed that the patient's symptoms are due to asthma and not a related comorbidity before a dose increase of the preventer is considered. Patients should be referred to a specialist if asthma control is still not optimal, despite being on the highest dose of inhaled corticosteroid.

Stepping down treatment can be initiated when patient's asthma symptoms are well controlled for two to three months. A reduction of twenty five to fifty percent of the current dose of inhaled

corticosteroid can be commenced on agreement between patient and doctors, and the reduction can continue as long as asthma control is optimal. If symptom control is not maintained, the dose of inhaled corticosteroid should be increased to the dose that was previously effective. Children and adolescents who have been symptom free on a low dose inhaled corticosteroid may trial a complete cessation.

Stepped approach is different from the Symbicort® maintenance and reliever therapy (SMART) regime. The stepped approach utilises salbutamol or terbutaline as a reliever when symptoms occur, whilst SMART uses Symbicort® devices containing budesonide (preventer) and eformoterol (reliever) as a maintenance and reliever regime. Doses of 100/6mcg or 200/6mcg turbuhalers, or 50/3mcg or 100/3mcg MDIs are utilised in this approach. Studies have shown that SMART reduces the risk of a flare up when compared to high dose inhaled corticosteroids alone or in combination. This regime, however, is only indicated for adults and adolescents with poor asthma symptom control on conventional therapy.

The main aim of stepped adjustment is to maximise asthma control using the lowest corticosteroid dose. Therefore, before increasing the dose of preventer, patient's adherence and technique should be reviewed after ruling out possible alternative diagnoses. Stepping up and down treatment requires patients to engage in the management plan, and should not be considered if the patient is unable or unwilling to take this approach.

References

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