education for health | SUPPORTING RESPIRATORY IMPROVEMENT

Factsheet 24

Updated on 25 November 2020

Severe Asthma

This factsheet has been designed for use by healthcare professionals only.

Introduction

Asthma affects 5.4 million people in the UK.[1] Approximately 200,000 of the asthma population in the UK have severe asthma.[2,3] The following factsheet provides key facts around severe asthma and how we as healthcare professionals can identify and support people with severe asthma to enjoy improved quality of life. Severe asthma is recognised as an area of unmet need; however, specialist asthma centres have been adopted across the UK and are now providing assessment and, where indicated, novel therapies for this asthma group.

Definition of severe asthma

NHS England defines severe asthma as,[4] "*people with a previous diagnosis of asthma that have ongoing daily symptoms despite maximal medical therapy and have significant side effects and co-morbidities secondary to their requirement for oral steroids.*"

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Difficult to treat asthma, (previously referred to as difficult asthma) is asthma which remains poorly controlled despite the prescription of high intensity asthma treatment, but is due to:

- Persistently poor medication adherence
- Psychosocial factors, dysfunctional breathing, inducible laryngeal obstruction
- Persistent environmental exposure to irritants and allergens
- Untreated or undertreated co-morbidities such as chronic rhinosinusitis, reflux disease or obstructive sleep apnoea
- Severe refractory asthma – ongoing poorly controlled asthma with daily symptoms and potentially life-threatening attacks. This is despite other co-morbidities being excluded, good adherence to treatment, trigger factors being removed when possible and maximal therapy provided, including daily maintenance or frequent rescue courses of oral steroids.

So how can we identify a person with potential severe asthma? Some of these steps may include:

- Proactively identifying poor asthma control by identifying people with asthma who have received 12 or more reliever inhalers in the last year
- Checking to see how many courses of oral corticosteroids have been prescribed, if >2 courses then a referral into Secondary Care maybe considered
- Following up on people who have had an asthma attack, see this as treatment failure and investigate why the attack has occurred
- Searching the practice register for asthmatics on maintenance oral steroids and/or oral xanthines such as theophylline.

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Moving forward, how to help exclude those who may have poorly controlled asthma rather than severe asthma:

- Ensure correct diagnosis: is this definitely asthma?
- Exclude any under treated or untreated underlying co-morbidities, e.g. allergic rhinitis, reflux. Refer for further investigations if necessary, e.g. ENT, gastroenterology.
- Assess and support adherence to routine therapy
- Check inhaler technique and understanding of treatment being offered.
- Optimize medication
- Assess for potential environmental triggers including potential occupational causes.
- Use a validated tool to measure asthma control e.g. Asthma Control Test (ACT)[5] and recheck following medication changes
- Check for underlying psychosocial factors using a validated tool to check for underlying anxiety and depression, e.g. Patent Health Questionnaire (PHQ-9)[6]
- Checking bloods for biomarkers in severe refractory asthma can be helpful, e.g. check full blood count for raised eosinophils (Severe Eosinophilic Asthma) & IgE (Severe Atopic Asthma).

When should referral to Secondary Care/Tertiary care be considered?

- If a person with asthma has been identified as potentially having severe asthma and all other causes for poor asthma control/over-use of treatment have been excluded, then referral is advisable
- The original asthma diagnosis is in doubt and further investigations are needed to confirm or refute the original diagnosis

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- Issues around adherence are unresolved and further input would be advantageous
- The person has positive biomarkers that may mean they could potentially receive specialist treatment
- There are known complications to oral steroid use e.g. osteoporosis, diabetes, cataracts.
- Use of daily oral steroids and/or >2 courses of oral steroids in the last year. This should include doses of rescue steroids given in ED/out of hours.

What are the treatment options for severe asthma?

When all other causes for difficult to treat asthma have been excluded and the person has a confirmed diagnosis of severe refractory asthma, they may be suitable for specialist treatment. The following treatments are currently available in the UK:

- Monoclonal antibody therapy – these specifically target a biomarker e.g. IL-5/IgE. This treatment can only be given in a specialist centre and needs approval by NHS England prior to commencement
- Bronchial Thermoplasty – This uses radiofrequency energy to reduce the elasticity of the smooth muscle. This is only considered in a small number of people when all other options have been excluded. This is currently only performed in tertiary centres

More detail can be found on www.nice.org

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In summary:

- Repeated oral corticosteroid use should be seen as a failure of asthma management
- Primary and secondary care clinicians need to adopt a proactive approach to asthma management.
- Consideration for specialist treatment should be considered in all people with severe asthma when all other options have been excluded

Further details on current recommendation for severe asthma can be found in the Asthma UK report "DO NO HARM – safer and better treatment for people with asthma."[7]

Also listen to our podcast around severe asthma to complement your learning.

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