Primary Care Respiratory Academy 2021

Clinical Webinars 5 & 6 Q&A

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SPIROMETRY

Are there any standard operating procedures for reintroducing spirometry in prisons?

There are no specific differences between prison, primary care and secondary care as well as community spirometry – it is probably worth accessing the PCRS (and colleagues) guidance on re-introducing spirometry to check on how that will fit into any environment – this is available at: https://www.pcrs-uk.org/news/new-update-spirometry-guidance

Does spirometry show obstruction or restriction?

Spirometry may show an obstructive picture and we need to be thinking, depending on the analysis used: is this normal for this person (we overestimate a diagnosis in older people using a fixed ratio)? Is this asthma and reversible or is this fixed obstruction (COPD)?

Spirometry may show a restrictive picture – however many lung diseases that can have a restrictive picture (e.g., lung cancer, pleural effusion, ILD, bronchiectasis) can be picked up much more readily and earlier with a good history, examination and appropriate other testing. Indeed, it is almost worth a case-based analysis if a patient is diagnosed with a significant pathology when that is first diagnosed by restrictive spirometry rather than clinical and other investigations.

For further information see https://pubmed.ncbi.nlm.nih.gov/19684995/ and https://pubmed.ncbi.nlm.nih.gov/32631927/

BRONCHIECTASIS

Can spirometry results be normal for bronchiectasis patients?

Yes – spirometry is worth doing in patients with possible bronchiectasis as it may help in diagnosing COPD or asthma, which are frequently co-morbid in bronchiectasis. Bronchiectasis is not diagnosed based on spirometry so normal/abnormal spirometry does not rule it in or out.

What is the presentation of bronchiectasis on a chest X-ray?

Bronchiectasis is not typically visible on chest x-ray and the purpose of doing a chest x-ray is to pick up other pathology. High resolution computed tomography (CT) scanning is required to diagnose bronchiectasis – it picks up dilated bronchi and a few other things that make the diagnosis.

Is it possible to have a non-productive bronchiectasis patient?

It is possible to have bronchiectasis patients who don't regularly produce sputum but do produce when they flare up. For example, if you have patients with frequent chest infections, who have no symptoms in between, that would warrant consideration as possible bronchiectasis. The majority of bronchiectasis patients produce purulent or mucopurulent sputum.

How long does sputum keep in the fridge for testing?

The literature on this is scant. From what I've read 24-48 hour is probably ok and unlikely to affect growth from the sample.

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Should bronchiectasis patients be given a rescue pack?

The British Thoracic Society guidelines on adult bronchiectasis recommend that patient's exacerbations are treated promptly and that "suitable patients have antibiotics kept at home". This is a good practice point rather than one backed up by a large amount of evidence. I would consider it an option, depending on the patient. They would typically be making contact around the time of an exacerbation, whether or not then have a rescue pack at home, to arrange sputum samples and clinical assessment, if needed.

ANXIETY & DYSFUNCTIONAL BREATHING

Do anxiety symptoms differ in children?

Anxiety symptoms can present in many different ways and this can be harder to diagnose in children. Generalised anxiety disorder and panic disorder in adults guidance can be found at https://www.nice.org.uk/guidance/cg113. This gives some idea of the presentation in adults – but this can be even more complex in children. Interesting we weren't able to find a great reference to point you too relating to presentation of anxiety in children – but certainly 30 plus years of clinical practice with children and adults would suggest that children can present in many ways (abdominal pain, fatigue, breathlessness).

How can I diagnose hyperventilation?

The first thing to do is think about it. It can be useful to measure respiratory rate on a regular basis manually whilst talking to patients – but remember that hyperventilation is not the only presentation of people who have problems with their breathing. A useful article is readily available to read more about this: https://pubmed.ncbi.nlm.nih.gov/27581828/

Can dysfunctional breathing cause more sputum production?

Although there is a recognition that dysfunctional breathing is more common in COPD than asthma and sputum is more common in people with COPD than asthma – it would be sensible to think about dysfunctional breathing in anyone with lung disease – or indeed with breathlessness.

TREATMENT & MANAGEMENT

Should adults have booster whooping cough vaccines?

National guidance on booster for whooping cough vaccines is available in the Green Book guidance on pertussis (2016). This guidance supports women who are pregnant having a booster dose. https://www.gov.uk/government/publications/pertussis-the-green-book-chapter-24.

Are there any good resources to help with a PAAP?

Asthma UK has good asthma action plans but the key phrase is about personalising the information for the patient in a language and style they can understand. This may be written, may include images or a video clip. It is for the person with asthma to feel comfortable to know how to manage their symptoms if things worse.

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TREATMENT & MANAGEMENT (continued)

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What would be the advice for exacerbation treatment if a patient is on MART?

Exacerbations for people with asthma on MART are managed in the same way as any other exacerbation.

When should you consider a repeat course of antibiotics for a COPD exacerbation?

A repeat course of antibiotics for an exacerbation of COPD would be rarely needed, unless the infective course is bacterial and hasn't been eliminated with the first course of antibiotics. Remember, someone who has pneumonia requires a 5 day course of antibiotics but will have a cough and be breathless for around 4-8 weeks – we do not keep repeating the antibiotics until they feel better. If a patient is not better after an emergency treatment course of antibiotics and steroids, it would be appropriate to review to check for arrhythmia, heart failure, pulmonary embolus and consider bronchiectasis or pneumonia rather than an exacerbation. It may be appropriate to culture a specimen of sputum.

At what stage would you consider oral corticosteroids for a COPD exacerbation?

Most of the trials for COPD exacerbations suggest that at the earliest sign of symptoms, people increase their short acting bronchodilator treatment. However, if the symptoms progress, then consider either an antibiotic or course of steroids, or both (for 5 days). Many clinicians would use both treatments, though some, if having several exacerbations, will trial treatments – with steroids if more wheezy or antibiotics if mainly discoloured phlegm and cough. This is not a precise science and depends on previous responses, safety netting to encourage the patient to recontact if necessary.

REFERENCES & RESOURCES

PCRS guidance on re-introducing spirometry: https://www.pcrs-uk.org/news/new-update-spirometry-guidance

NICE guidance on anxiety disorder and panic disorder in adults: https://www.nice.org.uk/guidance/cg113

NICE guidance on pneumonia in adults: https://www.nice.org.uk/guidance/cg191

Green Book guidance on pertussis: https://www.gov.uk/government/publications/pertussis-the-green-book-chapter-24

Asthma UK: https://www.asthma.org.uk/advice/manage-your-asthma/action-plan/

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