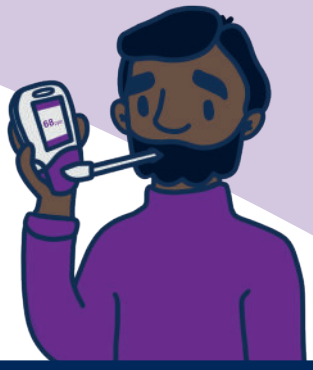
FeNO Case Study: Jamie



Jamie, 38 years old
Initial FeNO result: 68 ppb
Follow-up FeNO result: 42 ppb

Symptoms on examination:
- Peak flow 420 L
- Inhaler technique moderate but dispensing multiple puffs per breath, no spacer.

Jamie's Background:

- Diagnosed with asthma at 21 years old
- Had an acute episode 2016 requiring attendance at an emergency department
- Reports poor control of asthma symptoms since 2016
- Medication prescribed: Fostair 100/6 2 puffs BD Spiriva 2 puffs daily, Montelukast daily and Salbutamol as required
- Needed to take oral Prednisolone on a number of occasions
- Recently admitted to hospital with an acute asthma exacerbation
- Jamie uses his rescue inhaler (salbutamol) 3-4 times a week
- Reports having hay fever
- Non-smoker, previous cannabis use

How FeNO Helped:

Identifying significant airway inflammation at the initial visit helped the HCP initiate a discussion with Jamie surrounding his adherence to medication.

The HCP was able to objectively show the positive impact adherence to medication has on airway inflammation and asthma control by showing Jamie the reduction in FeNO score from his initial visit. Jamie was able to associate a lower FeNO score and improved symptoms, motivating him to adhere to his medication.

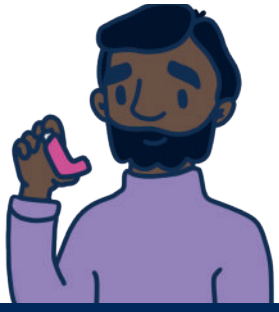
A FeNO measurement was able to show Jamie the significant role airway inflammation plays in asthma, and how his medication controls this, improving Jamie's understanding of Asthma and how his medication works in controlling factors which leads to Jamie feeling unwell due to his asthma (increased airway inflammation).

Recommendations:

Jamie can see importance of regular inhaled therapy and says he will take inhalers as prescribed to get asthma under control. He agrees to fine tune inhaler technique by inhaling more slowly and only dispensing 1 dose per breath. The addition of a spacer was suggested but declined.

A follow up appointment was booked for 4 weeks - he has oral prednisolone at home on standby but will make contact if symptoms worsen.

FeNO will be repeated at the subsequent appointment to assess inflammation (and adherence), consideration to changing to a dry powder inhaler if technique is still suboptimal or spacer declined.



Summary:

Jamie has poorly controlled symptomatic asthma. Mechanisms of inflammatory nature explained in conjunction with action of inhalers. The clear explanation and raised FeNO prompted a more frank conversation with Jamie regarding his adherence to medication. He says he uses Spiriva daily as prescribed but only uses Fostair and Montelukast if he becomes more unwell. He tolerates a high symptom burden before taking this action. The importance of gaining and maintaining control with regular inhaled therapy was explained. A personalised asthma action plan co-created with patient setting out goals he had decided himself. A written copy was supplied which Jamie photographed on his phone and put into a favourites file for safe keeping. After Jamie had received the above advice, a follow up appointment had been scheduled for 4 weeks later. On Jamie's follow up appointment, a FeNO test was repeated. Jamie's FeNO score was 42 ppb; this indicated a significant improvement in airway inflammation (reduction by 38% from initial FeNO score). Jamie pointed out that seeing his FeNO score drop shows him how important it is for him to regularly take his inhaled therapy and acknowledged he felt much better and was using his rescue inhaler (salbutamol) much less than what he was previously.

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