



FeNO Case Study: Natalie



Natalie, 53 years old
Initial FeNO result: 18 ppb

Symptoms on examination:

- FeNO 18 ppb (note nitrite rich diet yesterday)
- Inhaler technique good
- PEFR 485 L

Natalie's Background:

- Diagnosed with asthma at 7 years old
- Has a known cat allergy and multiple triggers for asthma
- Symptoms had improved by 11 years but flared again (pregnancy) at 24 years and has been receiving asthma treatment since
- 5 months ago a URTI increased her symptoms. Prescribed long-acting beta agonist in combination with a low dose inhaled steroid
- An adverse reaction caused eczema to flare so she went back to using an inhaled steroid alone but at a lower dose
- Taking Clenil® 100 mcg 2 puffs twice daily, using spacer some days
- Natalie is having to adapt her lifestyle to accommodate her symptoms
- Remains symptomatic if exposed to triggers
- Needs Salbutamol up to 4 times a day daily
- Has eczema, allergic rhinitis and multiple allergies
- Ex-smoker (11 years quit) smoked up to 4 cigarettes daily, around 5 packs per year
- Has relatives with asthma

How FeNO Helped:

Although Natalie's FeNO value is slightly higher than previous FeNO measurements, Natalie's FeNO value showed she was within a 'normal' FeNO range (18 ppb), supporting the HCP's decision to not increase Natalie's inhaled steroid dose (Clenil®), and only consider increasing inhaled steroid dose (Clenil®) if revised inhaler technique and/or new medication does not improve/ or worsens symptoms and leads to increased airway inflammation.

FeNO value will help HCP's monitor the effectiveness of change of treatment medication and revised inhaler technique on airway inflammation, ensuring change in treatment and technique does not adversely impact Natalie's asthma.

Summary:



Natalie has symptomatic asthma with multiple triggers.
The inflammatory nature of asthma and action of inhaled medication was explained.
Inhaler technique checked and minor adjustments to optimise.

Recommendations:

Given the slightly raised FeNO and Natalie's symptoms we discussed the options to improve control. Natalie opted to try a different combination inhaler. She realises they all have some lactose in (the reason she thinks her eczema flared with the previous combination dry powder inhaler) but the amount ingested can be minimised by rinse/gargle/spit after dosing. After discussing the options Natalie decided a once daily preparation would be best. Inhaler technique was demonstrated, and Natalie could use the device. If this does not improve things or she has a reaction the other options are to add in Monte-lukast which may give a benefit. These options were discussed, she would be willing to consider this. The third thing would be to increase Clenil to 3 puffs BD then step back down once well controlled but given the topical steroids Natalie is using her total steroid load needs to be considered and currently a normal FeNO does not support this. A spacer should always be used with inhaled steroids that are in metered dose inhalers and would be particularly important with this regime. Natalie's personalised asthma action plan was updated to reflect the current change. Particular attention to the red emergency section – what to do in the emergency situation – and Natalie was prescribed a Salbutamol inhaler and spacer to support this section.



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