Conversations with an allergist

Hay Fever

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Through the lens of a teenager and his parents, navigating hay fever and asthma, this article explores the real-life challenges faced by families dealing with these conditions. Written by leading expert in respiratory conditions, Dr Glenis Scadding, it aims to bridge the gap between medical expertise and the everyday experiences of those living with allergies. Read on to understand the complexities of hay fever, its intersection with asthma and appropriate clinical treatment, along with its impact on daily and academic life of the patient.

A mother brings her teenage son to the Allergy clinic.

"My son David has hay fever and his GCSEs are next summer. He really suffered last year. What can we do to help him?"

"You have my sympathy because hay fever is often trivialised but it can severely affect lives, particularly because it reduces the ability at to sleep well and school work suffers. First of all what are the symptoms? David, please tell me."

"I sneeze, then my nose keeps running, then it blocks up. It's horribly itchy, so are my throat and ears. My eyes itch too, they run and are red and sore. It's hard to see properly."

"Those are classic hay fever symptoms. Anything else?"

"Yes, I get wheezy and puffed out when I play football in the park in the evenings."

"Aah, you might be getting asthma too. Do you wheeze at any other time of year?"

"No."

"Then it is probably pollen asthma. Your chest may be getting irritated because your nose is very inflamed. Anything else?"

"Well, I've had to miss school a few times this summer because I was so bad, I'd hardly slept all night and I couldn't get out of bed. I felt so tired."

"How old were you when the hay fever started?"

His mum explains **"Since he was about 8, I think. The first year we just thought he'd caught a summer cold. It wasn't so bad. The next year we realized that he'd got the same as his Dad, hay fever. It seems to get worse every year"**

"When do your symptoms happen?"

"They start near the end of May until July then tail off. I am fine until the next May."

"Thats UK grass pollen season. If you had spring symptoms too it is likely that you would be reacting to tree pollen. With that clear history there is no need for allergy tests unless we are considering allergen – specific immunotherapy. In your case David the problem is severe and you have important examinations coming up next year, so we will do them. Which treatments have you tried?"

"Antihistamines mostly. I used to take one which made me sleepy but that was awful, I felt permanently zonked. Now I have one that suits me without the drowsiness. It cuts down the itching, sneezing and running but my nose still blocks up. My GP gave me a steroid nose spray to use, but it didn't work. Mum bought me a different decongestant spray which opened up my nose within a few minutes, but the running was even worse, so I stopped it."

"That's good, it's a mistake to use decongestant nose sprays for more than a few days or they can make your nose blockage worse."

"My Dad says that when his hay fever was bad he used to have a steroid injection. Could I have one of those next season?"

"No, I'll explain why later. Do you take an antihistamine regularly?"

"No, only when I need one."

"Aah, that's one thing to change. Regular, everyday use of all treatments works better for hay fever, so take your treatment from the start to the end of the season, even on days without symptoms. How did you use the nose spray which the GP gave you? Every day?"

"No, only when my symptoms were bad, then I use it a lot, two or three times a day. Eventually I got better but think that was because it rained and the pollen count dropped."

"OK. Corticosteroid nasal sprays work better when used regularly too. Were you shown how to use one properly? This online guide from Allergy UK shows how to do it in order to get maximum benefit and also gives you information about hay fever."

"Thanks, I wasn't shown. What about the steroid injection?"

"Unfortunately those depot steroid injections are no longer recommended. They don't work for very long and have bad side effects. It makes more sense to use corticosteroid in the

nose directly onto the affected tissue because then the effective dose is around a thousand times lower and is safe. Please can I take a look at your nose now?"

"Yes, but it's not a problem now."

"Sure, but it means I can see if there are any other problems such as a deviated septum which might make it harder for you to use a nasal spray. Please come with me to the examination room."

Whilst examining David's face, eyes, nose, chest and skin without his Mum present the Allergist asks him a few more questions.

"David, do you smoke or vape?"

"Only a little."

"Smoking or vaping is likely to make your allergy symptoms worse, I suggest that you stop now before you get hooked."

David nods. He then joins his Mum to have skin prick tests and breathing tests with the nurse. Afterwards they see the same Allergist.

"Well done. There was nothing wrong today on your examination out of season. Your breathing tests are normal and your skin prick tests show a large positive to grass pollen. That fits in with your symptoms, so is likely to be relevant."

"Isn't every positive test relevant?" asked David's Mum.

"Not always, false positives can occur and false negatives- which is why we do not do "fishing expeditions" with lots of tests, but only test for the things which are likely from what the patient tells us. Your son obviously needs more effective therapy next year. Here is an algorithm which I use which gives an overview of suggested treatments. Simple measures to avoid contact with pollen, like wearing a mask or putting balm inside the nose are important for everyone to reduce symptoms. Saline sprays or douches also help. These can be bought over the counter or made at home with a pinch of salt in a mug of previously boiled, then cooled, water. Indoor exercise in a gym in the evening would be better for David, rather than playing football outside, since pollen descends as the air cools. Please bring in your washing early for the same reason. In addition, David should have regular treatment every day but I know that, like many teenagers, he may not be very good at doing that. So I am going to give him a combination spray which contains both intranasal corticosteroid and an antihistamine because it works within minutes to reduce symptoms and can help even if used only as needed."

"Is the steroid safe?"

"Yes, the dose is minute. It is much safer than a steroid injection or steroid tablets. David, do you have a mobile phone?

"Yes, of course."

"Then I'd like you to use it to record your symptoms during the next pollen season. It'll help you to remember your treatment as well. Here is a link to a useful app. I'd like to see you during that next season with your phone data. Then, if the spray is not enough to control your symptoms, there's something else which I think we might think about. That is allergen specific immunotherapy, or AIT."

David nods. **"AIT – is that allergy shots?"**

"Yes. The idea is that you have very minute doses of the thing to which you are allergic, given repeatedly, in order to change the way your body reacts to it. The dose can be injected or taken as a tablet under the tongue"

"No way, I don't want lots of injections. They're dangerous."

"Not in the right hands. Would you consider taking a grass pollen tablet every day for the next three years?"

"I'm not sure. Is it better than the combo spray? What's the benefit?"

"It is a different approach. The under-the-tongue tablet gradually makes your immune system realise that it does not need to mount a massive immune response (the same one used to get rid of worms in the gut) to harmless grass pollen. When you take the tablet, you have a small amount of the grass pollen that causes your allergic reaction. You may get some itching in the mouth and throat at first. By taking recurrent small doses, you slowly become tolerant to grass pollen. AIT reduces symptoms by about a third and, if given before and during the season for three years, goes on working for at least two years after that. There is some evidence that it helps to prevent the development of asthma and new allergies. AIT is the only treatment that alters the course of disease. You would still need the spray at first, but later on the need for drug treatment should decrease."

"That sounds cool. I'll have exams every summer for the next few years so it'd be good to reduce the problem as much as possible. I'd like to give that a go."

"And you'd try really hard to take it every day?"

"Yes, I would. It sounds worth it to me. I'd rather have a treatment that gets to grips with the real problem not just one that treats the symptoms."

"Well, let's see how you get on with the combo spray first. We are only allowed to treat a few patients each year, so we have to identify those who most need AIT."

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Next Summer David returns to the Allergy Clinic with his Dad who appears concerned.

"My lad needs better treatment. Why won't you give him

a steroid injection? I used to have them and they did me no harm."

"There are better and safer treatments now. David, how have you been getting on?"

"The spray worked really well at first. I was OK for my exams in early June but there's one still to come next week. Now that the pollen count is really high my eyes are very red and itchy and they run all the time. I get wheezy if I try to exercise too. Can you help me, please? I need to feel better quickly. Here is my phone record."

The phone shows that David's symptoms are not controlled now with a level of 8 out of 10 for nose and eyes, despite using his combo spray regularly. On examination his nose is pale, boggy and wet and his conjunctivae are red. His chest examination and peak flow are normal.

"Yes, you need some additional treatment now: a brief course of oral corticosteroids to rapidly reduce the inflammation so you are well for your exam and some eye drops to protect your eyes. Wraparound sunglasses might help too when you go out. You have also shown you really do need AIT. If you still think you could manage a tablet a day for three years, I'll try to organise it with your GP."

Dad asks, **"Why not give him a steroid injection?"**

"It's a good question. The steroid injections used for hay fever in the past were depot preparations, that is they were supposed to gradually allow the dose out into the body. David needs something to work quickly and he doesn't like injections. Steroid tablets work within hours and, unlike the depot injections, can be stopped if side effects occur. David should take them in the morning, with food, for three days as well as using his nasal spray and eye drops. He should be a lot better by then, David please send me your phone readings next week and we can speak if you are still having big problems. Otherwise I'll see you In January to start the AIT. The first dose has to be taken under supervision, after that you take it at home. Here is a leaflet for you and your family to read."

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David's allergic rhinitis was controlled on his extra treatment and did well in his GCSEs. He is now over 16 and reappears alone in January to start the tablet AIT .

"Hello David, how are you today?"

"Fine, thanks. I took the antihistamine before setting out today. Your nurse rang me to remind me."

"That's great. Our nurse will just check your mouth, pulse, BP and peak flow, then we'll ask you to sign a consent form, then we can give you the first tablet. It might give you an itchy mouth but that is nothing to worry about."

David takes his first tablet. There is itching in his mouth and throat after a few minutes but he is not bothered by it, having known it was possible. It disappears after 15 minutes. He is asked to wait for an hour then allowed to leave the clinic with a reminder to take the tablet each morning set on his phone and a contact number for emergency use if necessary.

The clinic nurse rings him the next morning and finds he has already taken his next tablet without problems, apart from some oral itching. She messages him after a week: he is doing well, taking the sublingual tablet daily without problems. Regular contact is then maintained at 3 monthly intervals. David misses a few doses only. The next summer he is considerably better and uses a corticosteroid only inhaler throughout, his eyes are not affected, nor his chest.

Sublingual AIT is intended to be continued for three years, with benefit. David forgets to take his tablets in the next winter for over a week but returns to the clinic to restart in the next January.

He then continues on regular AIT, manages three good A levels and goes to University. He has minimal hay fever symptoms every summer and no other allergies develop. He does not become asthmatic.

NOTES

Allergen-specific Immunotherapy (AIT) is for patients whose allergies are uncontrolled by allergen avoidance and pharmacotherapy. Availability of AIT varies across the UK. It can also be used early in the course of allergic rhinitis to try to prevent disease worsening but has no licence for this in the UK. Concordance can be problematic, particularly with sublingual immunotherapy, therefore building a good relationship with the patient and maintaining contact are important and mobile phone use can be helpful.

The EUFOREA algorithm encompasses allergic rhinitis management at all levels, with general advice applicable to all sufferers across the top. Pharmacotherapy suggestions are given according to disease severity and subsequent control. Once well - controlled the level of therapy could be reduced or stopped once allergen exposure ceases. Failure of control should lead to consideration of additional therapies and of allergen- specific immunotherapy.

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