

ENT Concerns **With Adam Frosh**

APM: We have a very eminent guest with us this evening, a very senior ENT consultant. In his own private practice at the Lister Hospital in Stevenage, he covers a wide range of conditions. He does rhinoplasty. He deals with tonsillitis. He deals with glue ear. He deals with migraines. He deals with benign paroxysmal postural vertigo, which I'm going to abbreviate henceforward as BPPV and a whole range of other things. He is also the author or co-author of over 40 papers in medical journals on a wide range of subjects, things as diverse as the importance of securing your child seat even when there's no child in it, Creutzfeldt-Jakob disease and a number of other things which I'm sure we'll cover as the evening goes on. Most importantly, he's also written a book, which is called *Hosting an Elegant Dinner Party*, and the strapline is *The Surgeon in the Kitchen* and his name is Adam Frosh. Adam, welcome to the Academy. It's a great treat to have you with us.

AF: Thank you very much.

APM: I mentioned all those conditions that you see in your practice and I wonder, I probably didn't cover all of them, what's the scope of your practice these days and has it changed a lot over the years that you've been in practice with, you know, fashions and current diseases, immunities and so on?

AF: Well, I've been in ENT for quite some time now and that gives one advantage to see how the demographics change. My overall scope in ENT is a...I'm a general ENT surgeon but I have specialist interest in rhinology, so disorders of the nose. In terms of what I do, I cover children's ENT, so ear, nose and throat and all the major conditions of that. So it's quite a wide range in scope in ENT practice. In terms of the demographic changes, because I've taken an interest in headaches, I'm seeing a lot more headache type referrals and also, I'm seeing a lot more of those intractable type headache cases that they've tried all sorts of or manner of medications, antiepileptic, tricyclic

antidepressant type treatments and I'm actually getting some good results from sphenopalatine ganglion steroid blocks. So a quick operation under general anesthetic, takes about 10 minutes to perform. We're actually targeting the sphenopalatine ganglion which is normally quite inaccessible behind the maxillary sinus. It seems to be a junction box for a number of headaches and that seems to be the sort of common neuro pathway fire.

APM: What sort of headaches? Which ones?

AF: So where I'm getting improvements is trigeminal neuralgia, atypical face pain and some cluster headaches but actually, we're doing some work that really looks at migraine, actually as a primary treatment for migraine on the basis that the more modern understanding of migraine actually sees the sphenopalatine ganglion as a neural pathway in relaying where that pain arises from the brain and then manifest as a headache.

APM: And how are you getting at it, given as you said, it's relatively inaccessible?

AF: Well, as a technique that was evolved to stop posterior nosebleeds...so nosebleeds arise from the back of the nose in a slightly more elderly population than we normally see with the standard children's nosebleed which is almost always at the front. The advent of the sphenopalatine artery ligation where we've used rigid telescopes...now, the rigid telescopes have really transformed our specialty over the last 15, 20 years. We're using them to magnify and illuminate all parts of the nasal cavity and specifically at the back of the nose where we can actually identify where the sphenopalatine artery emerges from the sidewall of the nose. We can actually place a little titanium clip and that's actually very useful in that group because posterior nosebleeds or nosebleeds at the back of the nose are notoriously very difficult to get to. You can't really cauterize them because it's arising from an otherwise inaccessible artery. So because we can access that area, I've pioneered this technique of actually injecting steroids into the little gap in the bone where the artery comes out and that gives us a little entry point into the pterygopalatine fossa where that little ganglion sits. Otherwise, it's quite an inaccessible box behind the maxillary sinus.

APM: So if a patient presents to you with migraine, at what point do you take this procedure to be the way ahead? I mean do you try other things first? Do you...?

AF: Absolutely. The majority of cases of migraine can be treated simply by modifying one's lifestyle and that could mean modifying one's diet and modifying their sleep pattern. So the thing that's confusing about migraine is that it is, in a sense, in my opinion, a symptom rather than a diagnosis in itself and it could be a manifestation of a lot of things like stress, poor sleep, general illness, sinusitis which makes it rather confusing and bright lights and stress, just overall stress and worry can set these things off. So there's a

number of primary things that you'd want to consider first and then if one needs to then move on to the next phase of treatment then...so you've identified whether there's...so there might be some simple medications, codeine. Make sure that they're not taking codeine for it because that can actually remodulate the pain and prolong it. So codeine's a real no-no for migraine and the other thing is oral contraceptive pill, quite simple.

APM: Are those things widely known? Because I mean I think all of us in practice, we see plenty of people who describe their headaches as migraines. I've never thought to ask whether they're taking codeine or contraceptive pill. I mean would GPs be well aware that they should steer clear of those —

AF: No. I think the majority would think about that and...but of course, everything slips through the net at some point but I think generally speaking that's the sort of first line of effect. So certain foods, are they eating cheese and red wine? That often comes up, processed meats, those some high salt content foods, processed foods, tend to be containing substances there, sort of the red wine,ianti wines and they're important to identify first because easy things You want to get an easy hit with migraine and the other thing is there anything you can do to change the sleep pattern. Why are they not sleeping? Are they too hot at night? Are they stressed? Certain things, practical things that can be done to improve their sleep but if you've gone through that and they're still symptomatic then you might want to start thinking about the actual medical treatment of it. Now, the medical treatment of migraine is really split into those treatments which stop it happening in the first place, so they're the prophylactic treatments and those treatments where you want to provide the treatment the moment that you get the migraine starting. So medications like sumatriptan, that type of medication needs to be taken really at the onset. So those migraine sufferers that have an aura, so they might have a visual disturbance, they might feel a tightening or a band around their head before the migraine happens, they're the ones that you want to actually spot so they can have their sumatriptan and keep it with them all the time, they take their medications because once the migraine's settled in, there's nothing that's going to shift it except time, dark room and bed rest.

APM: It's quite distressing though. There are a number of patients I know that...they don't get the headaches. They just get the visual or the floaters and so on, which...I mean do you treat them? Do you worry about them or do you just say it's not causing any pain or real problems and just leave them to be?

AF: I suppose as with everything in this situation, it depends on the degree of suffering that they're having. So if it is a matter of they're getting a visual disturbance then it could be catastrophic depending on what they're doing at that time, what their work is but I think in my experience, most of them are associated with headache but also, face pain as well that many people say, "I

am a migraine sufferer but I'm getting face pain or headaches across the front and that's not my migraine." Now, very often, that might actually just be a facial manifestation of a migraine. So not all migraines are the same and people may have different types of migraine.

APM: How do you workout if that's the case?

AF: Well, my job as an ENT surgeon is to actually make a differentiation between a facial migraine and sinusitis and other forms of face pain such as cluster headache, the trigeminal neuralgia or atypical face pain. There's a number of them. So one of the good tools that we have is the CT sinus scan because what's good about the CT sinus scan is its 100% negative predictive value. So if the scan is negative, you know it's not sinusitis.

APM: But if it's positive, you can't be sure that it's just the sinuses.

AF: Well, the confusing thing is that sinusitis can, itself, trigger migraine. So sometimes you really want to treat the root cause of the problem and sometimes, sorting out the sinusitis actually sorts out the migraine. One of the differentiating factors between the two is that migraines are associated with visual disturbances and auras; one feels nauseated with it but also the severity of it. So someone who's giving an 8 or 9 out of 10 type pain or even 7 out of 10, you kind of lean towards the, "This sounds like migraine," because sinusitis doesn't usually cause that degree of pain. And some migraines are associated with quite marked neurological symptoms and in fact, I had a patient who was a dancer. She was part of the opening ceremony in the London Olympics and she suffered with hemiplegic migraine. So effectively had a stroke while she went through this and she tried all manner of medications. So went through the whole BNF book of standard treatments. Nothing worked and I treated her successfully with botulinum toxin to the forehead. Now, there's a number of theories as to why botulinum toxin works but it's...a number of years ago, about four years ago it received a NICE acceptance in terms of...that it is a legitimate treatment for migraine. It seems to work by forcibly relaxing the frontal scalp muscles and that seems to break that cycle of muscle contraction ischemic type pain.

APM: But does this mean that she has to have this every few months?

AF: Well, she needed it every six months because botulinum toxin lasts about that sort of time and then after awhile, it just faded away and she'd get it again. So it seems to somehow break the cycle of it.

APM: Some people, and I was one of them when I first read this on your website, are slightly surprised that an ENT consultant is dealing with headaches. Now, you mentioned trigeminal neuralgia and you mentioned nosebleeds at the back of the nose, that there's connection there. What other connection is there between migraines and ear, nose and throat?

- AF: I suppose my interest in face pain really was...and migraine was really to do with this eternal question, "Is this sinusitis? Is it migraine?" And as an ENT surgeon, we're often referred patients with face pain that turn out to be migraine. And so in a sense, because I took an interest in that, I started to treat the migraine itself because I seem to be quite successful with that but the other element to migraine which is of great interest in ENT is the fact that this is probably one of the commonest causes of dizziness in the adult population and then while ENT surgeons are looking at Meniere's disease and BPPV...BPPV as we're going to talk about later I think is a common form of dizziness but actually, migraine is one of the commoner ones and probably something of the order of 10 times more common than Meniere's disease.
- APM: Really?
- AF: So it's an important diagnosis to make because it has an important and specific treatment and the reason for failure of treatment of the dizzy patient may be because the failure of recognition that it has migraine at its center.
- APM: If you were to see a patient who told you that they had dizzy spells but they hadn't had pain, would you still be looking at a migraine component?
- AF: Yeah. The common presentation of a migrainous type dizziness is, well, they have headaches but not all of them do that but a lot of them have...at the time that they are dizzy, that they have some form of visual disturbance, very common and if they have photophobia or phonophobia, so if they don't like the lights, they want to get in a darkened room, they prefer the darkened room when they're dizzy or sound, when people speaking to them, it's making it worst, that's almost pathognomonic of migraine. So you've got the diagnosis in that.
- APM: And Meniere's, you mentioned the connection between Meniere's and migraine.
- AF: Well, Meniere's disease is a curious condition and there is an awful lot that we don't know about it. It's described by Prosper Meniere in 1861. It is pathologically associated with expansion of the endolymph compartment. So there's three fluid compartments in the inner ear, the labyrinth and it's the middle one called the endolymph that seems to expand. Now, of course...because it's a very difficult thing to study because we can't take out temporal bones and we can't look at them in the living. So we only really see cadaveric type specimens and retrospectively map what we can see histologically with a patient's —
- APM: Can you see that in your functional MRI or is it just too long a procedure to —

- AF: No, there's no functional MRI changes. There are some electronic changes. So electrocochleography can actually demonstrate certain wave patterns that are associated with Meniere's disease but the theory behind Meniere's disease is that the endolymph compartment swells up, causes this several minutes of rotatory vertigo, a terrible sinking feeling, the tinnitus and muffled hearing or even a fullness in the side of the face. It's very common, very traditional but remember, with Meniere's disease is that the majority of patients don't fit the textbook description of the symptoms and that's what makes it so difficult because some of them might go on for more than 90 minutes and you think, "Well, that's not Meniere's disease," but it turns out to be and not everyone gets the fullness or tinnitus in the ear. So these things aren't set in stone. So quite often, we get a clinical picture of it. There is a school of thought that because there are certain similarities between the symptoms of Meniere's disease and the symptoms of migraine that actually has given rise to a modern school of thought which is not mainstream at the moment I must add that, that Meniere's disease is a spectrum, at one end of the spectrum of migraine and it's quite possible that that really is the case but more work needs to be done on that.
- APM: And if you've got other than...so you mentioned red wine and cheese, I'm going back to migraine and diet again, are there any other specific diet triad advice that you would give to patients suffering from any particular type of headache or from Meniere's or from any of the other conditions you mentioned so far?
- AF: Well, there's the eternal question about does chocolate cause it or doesn't it? The answer to these things is that those sufferers of migraine should consider exclusion diet, so a little test diet. So go without chocolate for a week, does it make any difference?
- APM: Is there a list of specific substances that they should try excluding? I mean a standard —
- AF: I'm not sure if there's a common, standard list but the common ones are red wine, cheese, processed foods such as sausages, hams and —
- APM: Which we're supposed not to eat now anyway cause cancer or something, don't they?
- AF: And they've got lots of salt in them anyway, so they're sort of bad for our blood pressure and chocolate.
- APM: And in terms of exclusion, how long would you recommend someone exclude any one or all of those in their diet in order to determine that it is the causative factor?

- AF: I'm not sure if there's any hard science behind it but I think that if after a week of exclusion, of abstinence from a particular product, if the migraines continue on that basis. I think you probably haven't hit the silver bullet of exclusion, dietary exclusion.
- APM: And after you've looked at diet...do you go through this in a sequence? You say, "Well, let's try diet first. Now let's try other social factors"? Is there a pattern for what you do before you get to the surgery part?
- AF: I think, yeah, there simply isn't time in our outpatient services to be able to do that, so the luxury of bringing them back, "Try this and then try that." So I do give them a list, you know, this verbal list of things to exclude and say, "Well, look, think about these things. Are you on the oral contraceptive pill? What are you taking for it? Are you overloading on codeine?" because a lot of people do and that really is a no-no.
- APM: They do because of their headaches or just because it's become a habit, because it's a drug they were prescribed ages ago for...?
- AF: I think it's because it's something that they can take alongside the non-steroidal anti-inflammatories like Nurofen and paracetamol. So it's something else that they can take and it's a little bit stronger than those other two things and it might work for the first few times but then what they don't realize is that it's actually propagating the problem.
- APM: So I mean you talked about BPPV earlier on and that was one of the key factors that got us interested in getting you on to this evening's discussion. Can you tell us how you would isolate that as your diagnosis before going on to demonstrate the treatments for it and...?
- AF: I mean in medical school which was a long time ago for me...I look young but it was, that...they say that 80% of your diagnosis comes from the history and maybe something like 15% come from your examination and then 5% from your special investigations and I think that's very true with BPPV. I think that's the classical ENT diagnosis, from the history. They will tell you that, "I'm usually OK but when I'm either sort of looking up," say hanging up the washing, painting the ceiling, lying down in bed, rolling over or... "Even in the middle of the night, I roll over and then there's usually a few moments of latency, a few moments of OK and then whoosh, the spins come on," several seconds of this, they calm down. They sort of have to hang on. They don't dare move and then it settles but even after it settled, they're feeling pretty rubbish for ages afterwards even though the acute phase is over. So when they tell you that, you've got the diagnosis. Of course, there are other sort of slightly more difficult ones, the more sort of nebular stories but the vast majority will give you that story.

- APM: So this is the positional element. It's the movement of the head or it's the rolling over in bed and so on. The paroxysmal element is the duration of the attack?
- AF: Yeah. Well, the paroxysms, it comes in clusters, these things, that quite often people find...they go through a phase where...so for several weeks, it's been plaguing them and then it goes away and then it comes back again. Now, the thing to remember, that the majority of BPPV is completely spontaneous. It just happens but very commonly, you ask them if they've had an episode of acute labyrinthitis and that confuses the ENT picture and where they say, "Well, actually, about three months ago, I had an episode where I had terrible spins and the world was spinning and I was vomiting. I couldn't get out of bed for two days and then I couldn't...I was wobbling. I wasn't straight on my feet. It took weeks before I got over it and even now, I don't feel as good as I used to, you know. My head is muzzy."
- APM: So that's definitely not BPPV. That's —
- AF: That's acute labyrinthitis.
- APM: Am I right in thinking that BPPV, you can feel nauseous but you seldom vomit?
- AF: Well, you can while it's happening but the point is that BPPV is often a subsequent effect of acute labyrinthitis. So once that acute phase is over, that sort of terrible spins for 2 or 3 days, usually about two days, sometimes one, then they get this positional type dizziness. You know that their BPPV was secondary to acute labyrinthitis. The other interesting thing is that it can be secondary to Meniere's disease. So it's over represented in people who have Meniere's disease, also in those who've had ear surgery and head injuries. So it's interesting to —
- APM: Ear surgery. What sort of ear surgery? Any ear surgery?
- AF: Any ear surgery, yes. So operate on the eardrum, on the —
- APM: Which would include grommets?
- AF: Yes but BPPV is an adult condition and the vast majority of grommets are performed in children —
- APM: I just wondered whether that the grommets as a child might've led to the greater incidence in later life.
- AF: No. I think that the ear surgery association is much more sort of in the acute phase of that.

APM: And what's actually going on in BPPV?

AF: Well, I'm going to show the diagram here. On this diagram, shows an ear. It's an external ear with its ear canal, the middle ear which consists of the eardrum and the little bony ossicles and they're connected to this stapes and this is the in-ear section which comprises of the cochlea and the labyrinth, the semicircular canals and this is the nerve that then transmits vestibulocochlear information to the brain. Now, the bit that we're concerned with with BPPV is this fellow here. So it's this posterior semicircular canal. So that's the lateral one. That's the superior one and that's the posterior one. Now, why it affects the posterior one in the vast majority, I don't think it's been adequately explained but the idea is that these are arranged in the three dimensions of space and it's very...well, evolutionary ancient apparatus. It's what fish have and it's what we have in common with fish but the idea is that they're bony chambers with fluid and there's little receptors that measure all the pickup, the movement of the fluid. So whichever direction or space we are in, we know we moved, we know we accelerate and we know which way up we are. Though it's not the only information because there's a lot of brain and eyesight information which tells us which way up we are but this, in terms of the in-ear or vestibular apparatus, this is an important part of information that goes to our brain as to the direction and position that we're moving. So the idea is that in the posterior semicircular canal, in BPPV, there are particles. Now, patients seem to love the word crystals and they seem to remember that more than they remember particles. So I'm quite happy to call it their crystals but they're really fragments of the otic capsule and the technical term is cupulolithiasis. So from the Greek meaning...lithos meaning stone but what it means is that there are little particles that shouldn't be there. So the analogy is you have your glass of water, you know, here, we have one and if you spin the glass, the water will sheer against the glass wall at the beginning and then it will catch up. If you continue turning it, the water will continue to turn. So when we are accelerating...when we stop accelerating as we're turning then the liquid within the...the fluid within the posterior semicircular canal will stay in sync with the bone but the moment we stop then the fluid continues against...relative to the bone.

APM: And in an upright adult, the posterior canal is going to detect which movement?

AF: Well, that movement. So when the head is dangling down, so the ear...in the dependent ear when the head is dangling down will...the position of the posterior semicircular canal is dependent. It's the dependent position but in BPPV, these little particles give an extra sort of swoosh. So that's why...that's the theory why once they've moved into that position, the little particles run at the base of the semicircular canal and they drag some fluid with it and give the sufferer that feeling of a few extra spins and that's the principle behind the treatment is to move those little particles into an area called the utricle

which actually isn't demonstrated very well in here but there it is, there, just here, where it doesn't cause a trouble. So it's a bit like Lobster pot. They can go into the utricle they can't get out.

APM: And we're going to demonstrate that in just a minute. Are there any concerns that you would have about carrying out with the Epley maneuver, as it's known the collective mechanism maneuver for this?

AF: One of the first things I need to ask is, "How did you get to the clinic? Did you drive?" Although of all the patients that I've ever performed an Epley maneuver on to treat it, none of them have been so bad that they couldn't drive but —

APM: Afterwards.

AF: After the actual Epley maneuver but there is a potential licensing issue that if they have an accident afterwards, that...if they've had an Epley maneuver, there might be some issues with that.

APM: There's another issue with licensing about having BPPV in the first place.

AF: Yes and with a lot of dizzy conditions and that's something that is quite possibly underreported because it's not a very nice thing to have to then tell the DVLC well I've got dizziness because it's very...dizziness itself is a very prevalent condition.

APM: So in clinic, if you diagnose somebody as having BPPV, do you have a responsibility to tell them that they should let the DVLC know because they potentially are dangerous on the road?

AF: See, with BPPV, it's not usually such an issue because they're upright and they're not flopping down. With Meniere's disease, that's a different matter. With Meniere's disease, there is a duty to say to your patients that the DVLC wants to know, "Are you a danger to yourself and to others?" And I think it's only fair that they should inform the DVLC and the DVLC often then writes to us and they say, "Do they have..." The question they ask, "Do they have a sudden onset of dizziness?" So without warning, that could be a problem with driving. So that's a simple question.

APM: Shall we go and demonstrate the maneuver and...because people have had questions in already. So can we demonstrate this maneuver so that people know what it is? They might be able to do it themselves in clinic, I presume. Do you have to be an ENT consultant to conduct the Epley maneuver?

AF: One doesn't. Anyone can do it. I think it's difficult to do it on one's self.

APM: We're talking about osteopaths and chiropractors with their patients, of course.

AF: Yes but no, it's certainly something that anyone can do with skills, that's seen it being done and perhaps practiced it and it's not as difficult as it sounds but what is interesting is when I see people perform the maneuver, how variable it is in terms of what people take in as the technique and so...but the technique is very simple if you just follow the simple rules about it.

APM: We don't actually have a model other than myself. So I'm going to be the victim for Mr. Frosh's maneuver and I take my heart in my hand now as I move across here now. Let's put some more light on the scene. How would you like me, sir?

AF: I need you to put your bottom here and your feet there but you must not lie down. So lie on here, swing your feet up. Now, the position to be in, so what...the first thing that I tend to ask the patients is, "Do you know which side sparks off your dizziness?" So if you roll to the right or roll to the left and quite often, they'll say, "Oh, when I roll to the right."

APM: Is that the side you'd like it to be for the benefit of the camera?

AF: Well, in your particular case, yeah.

APM: It's the right.

AF: So what we do here, in that case...and quite often, I'd have an assistant on this side to help catch you but I don't think we have the luxury of that today. So if you shuffle back towards me, so what I'm going to do, that's fine, that's enough, I'm going to just measure out, guess out...so I want your head...when you lie down, will be then dependent off the edge of it, so your head will be dangling. So I need to ask, do you have any trapped nerves in the neck, any stiffness in the neck? Because I'm going to lay you down quite suddenly.

APM: No, I'm fine.

AF: OK.

APM: I hope I am fine.

AF: Which we'll soon find out. OK, so I'm going to say...it's going to be quite a quick maneuver. So just let your head dangle down. So 3, 2, 1.

APM: Forwards?

AF: There we go and then down. So now, once you're in this position...so you can see your head is turned. So the right ear is in the dependent position and that

means that the posterior semicircular canal is then in the dependent position itself. So we leave it for about 15 seconds because there's often what's called a latency where there's no real response and then suddenly, whoosh and then if it's positive, there's a very specific form of nystagmus. It's called rolling nystagmus where the eye's...or torsional nystagmus, very characteristic. The eyes twist which is why electroneurography is actually not very useful because it doesn't pick it up for...so they pick up nystagmus which is lateral or vertical but not torsional, interestingly. So we leave that. So the patients don't like it very much but you reassure them and say, "Well, look, actually, that dizziness means that I can now go ahead and do this maneuver." So once the dizziness stops, you have to wait for the dizziness to stop and then you say, "Has it stopped?" And you'll say, "Yes, it's all right. It's stopped now," and then now, I'm going to start tapping...so on this side, it's the equivalent here, just tapping the mastoid bone. So I'm tapping the mastoid bone here. Now, what's really important is that the movements are slow, slow and deliberate. So I'm tapping away. So if you do this quickly, the particles haven't had the time to move across. So you're looking at...in terms of the speed, you're looking at about between 30 and 45 seconds to then move your head across. Now, this is the bit where the assistant's very useful but we don't have that luxury. So I'm going to ask you to roll. So you put your right knee over your left thigh. So that's it and you're going to roll over onto this shoulder but you have to do it quite slowly. So slowly, so now, stop there for a moment. So at this point...and we're going to move you a bit further across. At this point, you say, "Well, you're going to feel dizzy again and if you feel dizzy again, that's really good," because there's that little point at which you feel dizzy and then a bit further across now and then you're going to start looking at the floor. So you're looking at the floor and then you have to wait, again, for the dizziness to stop. Once the dizziness has stopped, we're coming towards the end of the maneuver and you put your chin up on your chest now and then you're going to go into a sitting position. So you swing your legs over the edge and then you go into a sitting position but slowly, very slowly and then that completes the maneuver. So just wait there for a few moments. So that means that we've moved you from this side over to the other side and then we've wrapped you back up again. So the particles have gone from the posterior semicircular canal into the utricle and that should be it and then at the end of it...now, the classical thing is to say...you can relax now. Classical thing to say is you're supposed to sit more upright in bed but I've never found that personally of practical...it causes all sorts of troubles with people. I mean if you've got one of those nice propped up pillows it's useful but once it's done, quite often, people say, "Hmm, that feels a bit weird. Oh, it's gone. My head feels less muzzy." It's that good, in about 80% of the time.

APM: So of the other 20%?

AF: Sometimes it needs to be repeated. Sometimes it doesn't work first go and that in my experience, if...sometimes it makes it slightly worse. Now if it

makes it slightly worse, actually, that's quite a good sign because it means, well, you've hit the nerve, you just got to do it in the right way. Maybe it was done too quickly, maybe the particle, of course, wasn't quite there, maybe it was going through a slightly quiescent phase and it wasn't...you weren't quite in the full blown phase. The more dizzy you are at the time of the Hallpike-Dix test...so I should've said that. When your head was down, that bringing you down, that's called the Hallpike-Dix test or Dix-Hallpike and the Epley maneuver is then the rolling you over. So there's two components to it but the Epley maneuver follows the Dix-Hallpike. And sometimes it just...for the best one in the world, it doesn't work out the first time, might not work out the second time. So yeah, it's better but not perfect and the other thing that's caught out before where patients have come back is...if you repeat the Hallpike-Dix on the other side—

APM: And find the same thing —

AF: --and you found they've actually got bilateral BPPV.

APM: And that's something I mentioned earlier on. Is it normally unilateral?

AF: It's normally unilateral but I've seen bilaterally.

APM: Interesting. So just recapping on that, you held my head, affected side, dependent for about 25 seconds or 15 seconds I think then you started the tapping as you rotated me into the —

AF: The dizziness has to stop.

APM: Have subsided.

AF: You have to say, "Are you still dizzy?" A bit dizzy, wait a few moments. Now it's stopped then you can start the tapping and then moving.

APM: And when I came up here, you had me with my neck forward flexed. How long would you normally keep someone in that position or again, are we looking for any dizziness to resolve?

AF: No. Once you're sat up, that's the end of the maneuver. That finishes off. So there's only two phases of dizziness. The first phase which is the most common phase of dizziness is the Hallpike-Dix test. Second dizzy phase is when you're over on to the other shoulder then that usually...that's a good sign. If that precipitates dizziness, one, it's reassuring to the patient. They think, "Well, actually, you know what you're doing," and it also bodes well for the...in my experience for a positive and successful outcome of that.

APM: A lot of us physical therapists, chiropractors, osteopaths and so on, we'll get a little bit worried about that nystagmus because we're always told

nystagmus with a rotated, extended neck then that's a sign of...there's some vertebral artery insufficiency. Is that something that you consider or is it because it's a different type of nystagmus? You call it torsional nystagmus rather than lateral.

AF: The key to it is that it's a very specific position to be in. So a vertebral artery insufficiency is not going to cause a nystagmus with the head in that dependent position. Not really and it certainly won't cause a torsional nystagmus. So it's very specific, very dramatic when it comes on but I do classify them as mild and moderate and severe. So the mild ones, there's no nystagmus but they feel dizzy. Negative is negative they don't get any disease. There's no point...if the Hallpike-Dix test is negative, there's no point in then continuing. I won't do it.

APM: Is that a good negative result? That means they haven't got BPPV?

AF: It means that either they don't have BPPV or it's quiescent at that time. It's just not active. So a mild one is they do feel dizzy but there's no nystagmus, I'd go for it and a severe one is where there's torsional nystagmus and vertigo and they're the ones I particularly love because they're very symptomatic of it and they're the ones you can actually do something about it and they think, "Wow, this is...what was that? What's the doctor doing? This is witchcraft." They're saying, "Well, witchcraft works." This one does.

APM: Good, I'm glad to hear that. You get the same sort of thing in the superior canal, I believe. Similar process for dealing with that or...?

AF: This is in the minority and something to consider, when the story is slightly different, it's when...it's in a logroll situation.

APM: This is when the symptoms come on for —

AF: Yeah, so the symptoms...so yeah. So if they're sort of moving in a particular way and it's also when the standard Hallpike-Dix test is not giving you the response that you want and yet they're sort of dizzy, have a think about whether it is a superior semicircular canal. The treatment for that is to go on the back, logrolling on to the front. So that's actually slightly easier to move it over.

APM: And there's a set of exercises as well, I believe that are recommended in some cases for dealing with BPPV.

AF: I think that exercises aren't as useful as we'd like them to be in this condition because it's so specific and the Epley maneuver is so specifically designed for BPPV that I think that nothing short of a decent Epley maneuver is the way to go with this. I mean those...the Brandt-Daroff exercises, the rolling from one side to the other is useful as part of an overall vestibular rehabilitation

exercise, something that I often refer to the physiotherapist to help the very specific set of —

APM: Can we demonstrate those while we're here?

AF: It's a bit difficult because you need swivel chairs but also, I'm not a practitioner in that. So it wouldn't be fair for me to say that as an authority on it but it does require swivel chairs locking on, certain movements of the head in a particular way. And so really, it's all about just putting the labyrinth under pressure and rehabilitating it by sparking it into action. So they're very useful in situations of vestibular hyperfunction where the labyrinth isn't working —

APM: But these are exercises that have to be conducted with a therapist rather than something that the patient can do on their own.

AF: No, they can do...well, it's good to see the therapist first in a sense of...where I've demonstrated the Epley maneuver to you, maybe if I did it a second time, you'll be the next expert in it. So you can repeat that because I've shown you how to do it but if I gave you a diagram, you probably wouldn't do it as well.

APM: Indeed, yeah. I mentioned to you before we went on air that I was talking to an osteopath who had suffered BPPV herself some time back and she was emphatic that when she was treated with the Epley maneuver, it didn't work the first time and it was done...in her words, the practitioner, the consultant just said, "You have to do this until it works." So not at subsequent appointments but he repeated it then and there until it worked and she said it was very traumatic. It did work, as you described. Is that something that you would do or would you leave it for...just to see how it progresses before doing a second one?

AF: Well, I think that several attempts at an Epley maneuver is perfectly reasonable because I've personally seen patients that have improved. We work on anecdotes, don't we? That have improved on a number of goes and we do know that it's only really about an 80% hit rate of getting a cure on any particular Epley maneuver. So it's perfectly reasonable statistically that you might need to do it a number of times. Now, to say you do it until they get better makes an assumption and it's quite a big assumption—

APM: Of course, yeah.

AF: --that you've got the diagnosis right. So it's very important that you get the diagnosis right and if they're not...see, sometimes when we bring the patients down, they're instantly dizzy or they're dizzy just as you're bringing them down. That's probably not BPPV. That might be a more central cause. So always be wary of the central cause of vertigo, sort of demyelination. So things that cause an atypical type of positional vertigo.

- APM: Now, you're saying that before you've even rotated the head and as they come down, they're dizzy already, that would ring alarm bells.
- AF: That would, yeah because normally...I won't say normally. There's often a latency and classically, you bring them down and then they're all right for a few moments and then whoosh, it comes on. It's quite an amazing thing to see and so it's that latency that really gives you...that really defines the condition but if they're sort of dizzy on the way down, "Whoa, that's not...whoa," and then you bring them up and they're still dizzy and it's there and it's not going away, that's not BPPV.
- APM: Do you find though that some patients might be quite anxious about that whole maneuver? First of all, you're allowing someone to drop you, supported over the back of a table which might be alarming for someone who's frail or elderly. They're also anticipating feeling dizzy. So you might get the wrong feedback. You might think that you're getting these alarm bells but actually, they're just nervous.
- AF: No. It's very important you tell them, "Your head will be dangling off the edge of the bed. Don't worry. I'll catch you," but also, having someone there...we didn't have the luxury of that for you, to have someone standing here gives you the reassurance that you're not going to fall off the edge of the bed because a lot of people do feel, when they go up on their shoulder, they're going to fall. I'll tell you a funny story that my friend who works in a butcher's and it was on a Sunday and I said, "Look, I'd like to cook a duck and I want to get this...can you provide..." Well, the shop's closed but the boss, she lives near or on the butcher's store and, "I'll ring her up and tell her to get you the duck and so just knock on the door, she'll get it for you even though the butcher's closed." So he said, "But I will warn you. She's been getting dizzy. So she might actually...she might sort of just stop you on that." So I said, "Oh, OK, all right." Anyway, I was with my son in the car. We drove off to the butcher's store, knocked on the door. There's a lady. She said, "Oh, yes, here, we got the duck ready and Steven had told me about the duck." I said, "OK, thank you." She said, "Pay Steven, I'll work out the price." All right. On the way out, stepped out of the door, she says, "Oh, by the way," I was like, "Here we go," "I've been a bit dizzy," and then she described it. She described absolutely classical symptoms of BPPV. So I said, "OK, right. Well, we don't really have a couch." So I'm calling my son who was sitting in the car. "OK, oh, yes, you've got a nice big butcher's block." I was putting her on the butcher's block and said, "OK, right. OK, we're going to do this maneuver," and sort of my son's saying, "What are you doing? What are you doing, dad?", OK, anyway, he was there, ready to catch her, did the maneuver and I said, "Well, that should sort you out," because she had fantastic Hallpike-Dix test response. So I said, "OK, tell me how it goes. Tell Steve how it goes." So next day, I saw Steve, I said, "How much do I owe you

for the duck?" He said, "It's for free." The dizziness is gone. So that's the strangest BPPV story I could give you.

APM: So there you are, all this nonsense about buying hydraulic plinths is possibly unnecessary when you can make do with a butcher's block. If you've got more questions, there are a few on my list about BPPV, do send them in but we will try and move on to other issues which I know are of concern to our audience. I've got one here actually about the dependent ear. If there isn't a dependent ear or both sides are affected, which side do you start or doesn't it matter?

AF: It doesn't really matter. I tend to say, "Which is the worst side?" If they say they get it on both sides then just ask them which is the worst. It doesn't really matter because you can repeat the Hallpike-Dix test on the other side.

APM: And I think we answered the one about does it need to be repeated and how often and as you said, you know, you said 2 or 3 appointments I think and then try another one —

AF: Yeah and I think if you've tried it four times and it's still not working then I think...the other thing to think about, if the Hallpike test is very positive and you really are convinced this is BPPV but your Epley maneuvers aren't working...Epley designed a vibrating device. Remember when I tapped your mastoid?

APM: Yes.

AF: Epley designed a vibrating device. So I liken it to those Christmas toys you know, when you...those little balls that run around. You have to put them in the recesses and tap it. Not that I was very good at those things but it's quite a good analogy in a sense that that's what you're trying to do and that's what the vibrating tool is about. So audiometers, those sort of...the hearing test equipment has a bone conductor. So it's quite useful to use the bone... it comes on an Alice band. You can use the bone conductor of the Alice band, set to a low frequency setting, 250 hertz. Set it up quite high and it vibrates for you. So it might be more efficient than just tapping. So it's worthwhile trying that.

APM: And you weren't certainly tapping at 250 hertz.

AF: No but it usually works.

APM: So maybe we should move on. One question, which I promised one of our members, Susan, to ask, was about blood group diets because you talked about specific exclusions earlier on. Do you have an opinion on whether diets related to your specific blood group are worth pursuing?

AF: It's certainly not within my remit of understanding, neither do I —?

APM: But as a chef?

AF: I don't think that's a mainstream view of medicine. So I wouldn't be the right person to ask on that.

APM: What I'd like to move on to is grommets. It was a question that came in right at the beginning of this from...I think if I'm right in assuming that this Robin is the one I know, a friend of mine in Exeter. Thanks, Robin. It says, he may as well start off with some controversy and he has put a smiley face in this, in the 40 years between grommets in his own ears and grommets in his son's ears, there really doesn't seem to have been any progress in the ENT approach to this sort of thing and yet, large sums of money are routinely spent on surgical procedures and medical whilst very little sum of money is given to preventative health care. Is that a fair assessment?

AF: Now, probably slightly unfair on the basis that glue ear seems to be a product of a design defect in the human child.

APM: Now just in case anybody doesn't understand what's going on here, as I understand it, glue ear occurs because the Eustachian tube closes so that it doesn't drain the middle ear properly and then the lower pressure in there induces fluid to fill that region which then becomes rather sticky and impedes the movement of the ossicles, is that right?

AF: That's really pretty much it.

APM: So basically, we've got a lot of gunge in the middle ear.

AF: On the diagram, yes. Well, it represents a failure of ventilation of the middle ear. Now, normally, the middle ear is ventilated through the Eustachian tube. We do it automatically. We take it for granted, go down in the hill in the car, come down in the airplane, we swallow because we're equalizing pressure or we scuba dive, we have to perform auto inflation to actively put air into the middle ear because what you want is the same pressure in this middle ear cleft as in the outside world and when those pressures are the same, that's when the eardrum works so that it's most efficient. So if this doesn't work very well...and in children, there seems to be a design defect that they're short and they're also...they're not just —

APM: Children are short or the Eustachian?

AF: The Eustachian tube is short.

APM: They're also horizontal I believe as opposed to...

AF: Yeah, they are more horizontal in childhood and they become more slanted but they're also actively ciliated things, so a bit like a fallopian tube to the uterus. So they're not just a tube. They have active ciliated epithelium and so there seems to be an issue of immaturity of that process and it also seems to be associated with the activity of the adenoid or the inflammatory activity of the adenoid which sits behind the nose where...between the Eustachian tube orifices and lymphoreticular tissues, so the sort of tonsils, the adenoids, there's a sort of whole ring of these lymphoreticular tissues called Waldeyer's Ring and there's...so base of tongue, the palatine tonsils which we see when we look in the throat and the adenoid at the top. So that's full ring and all they are is condensations of these B-cell, white cells lymphocytes. We don't need them in adult life. Children don't need them either. They seem to be part of the B-cell maturation process of our immune system. So we don't need them. In fact, just like we don't need our appendix. The appendix is made of similar stuff. No one worries about infections later on if we take out our appendix. So take out adenoid and tonsils is not an immunological concern but in children, the immature lymphoreticular tissues often are very aggressive. They often become inflamed. So children often have big glands, big tonsils and big adenoids and in that situation, they can cause active inflammation in that bit of the Eustachian tube and then that makes the tube more dysfunctional. So when they get older, anatomically, the tube becomes wider, less horizontal, the maturation of the ciliated epithelium and the reduction in the aggressive inflammatory immune system. You see, kids get recurrent otitis media, little children. Not the big children, not the adults, the little ones and many parents think, "Oh, my poor child. Their immune system's so low. They're getting infections," and you can understand why they think that but what actually is happening is that they're very healthy. Their immune systems are too healthy. They react in the most aggressive way to viral loads. So they get a virus and it's causing this wild inflammatory reaction that causes severe pain. So these little children have recurrent severe pain and that's the recurrent otitis media and quite often, they have glue ear as well. So I kind of think...in treatment and management terms, I think of glue ear as persistent otitis media with effusion, with...as one stage. Another thing could be recurrent otitis media, which is the child, has recurrent pain and the two can sometimes co-exist. Sometimes there's recurrent otitis media, child has pain, sometimes the ear discharges and then they're back to normal. That's the other thing is that if fluid builds up here...so you're absolutely correct. This becomes negatively pressured when the Eustachian tube doesn't work properly. So this middle ear cleft becomes negatively pressured, the...so the eardrum becomes indrawn and mucous fills the cleft. So with a grommet, the idea is that if one is to poke a little hole through the eardrum that suddenly equalizes the pressure in the middle ear and suddenly, the hearing goes up to normal. It just returns to normal and the mucous then gets absorbed. The problem is —

APM: It doesn't drain. It gets reabsorbed.

AF: It doesn't drain. Yeah, gets reabsorbed, yeah. So the idea of doing that is not to drain fluid out but to—

APM: Equalize the pressure

AF: --let it just go away and so the idea is that the eardrum will just eventually close just like skin or other cavities of the body after several days and heal. So the grommet is a small hole to stop that sort of little hole, it's a cross between a washer and a rivet.

APM: It looks like cotton real I thought, with ends on it.

AF: That's another analogy with a hole through it. And that keeps the hole open and that stays in between 4 and 14 months and the ear eventually sheds it. At about 98.5% of the time, the eardrum then heals over.

APM: So I always worry about this because I've perforated an eardrum myself once and...because I am/was a diver. It worried me that thereafter, that tympanic membrane would be less effective or left less resistant to further damage or infection and so on. What's the case in children? I mean does it heal and become pretty much normal?

AF: Eardrums are pretty tough things and pretty resilient things that I'm sure your eardrum will heal. The vast majorities do but about something like between 1% and 1.5% of all the grommet cases, the eardrum will not heal. They're left in the permanent perforation. That doesn't normally cause a problem but it can cause infections and hearing loss later on but the thing is —

APM: Presumably the membrane is not as effective with the hole in it as it would've been if it was intact.

AF: No —

APM: Does it reduce hearing at all?

AF: No.

APM: Really?

AF: The grommet shouldn't affect the hearing at all. Surprisingly, it doesn't because the efficiency of the eardrum is about its compliance and not about how completely intact it is. But the thing is, what I was going to say about those cases where there's a persistent perforation, you have to remember that many children who have very active glue ear...active middle ear disease have spontaneous perforations. So maybe that in that group that we're just

looking at the very symptomatic, the very sort of severe end of inflammatory glue ear where they're not healing anyway.

APM: So to answer Robin's question then, I mean have there been any significant advances over the 40 years that he mentions in approaches to this?

AF: No. The only advances is telling ENT surgeons when not to put grommets in.

APM: Which would be...?

AF: Well, you see, the leads report in the 1980s identified that as a profession, we were putting in far too many grommets and that was absolutely correct. And so the advances in effect has been about understanding the natural history of glue ear and the formation of a NICE guidance because if you look at the population of glue ear, if you review them, in three months, ⅓ of them would've got better spontaneously. So really, those ones that we're identifying for grommets are those hangers-on minority hangers-on where the glue ear's persistent but also, glue ear in itself is not a reason for putting in a grommet. You want to see glue ear and some other problematic thing. So is it affecting the speech and language development, their relational associations with their peers and their parents? Are they missing out on things? You can imagine but you could become...a little child at school could become quite isolated if they can't hear what their friends are saying to them. So it is a bit of an issue and does need to be addressed but the balance of that is that the majority will get better if you just leave them alone but what you don't want to do is keep saying, "Oh, well, get better, get better," and in the meantime, this poor little kid is just not hearing and is losing out on a potentially curative procedure which —

APM: And possibly is in pain.

AF: The pain element would imply otitis media. If they are in pain then that should be treated on a different merit.

APM: Robin's followed up his question with...sorry, I'm going to top your glass up there. He talked about corrective measures and he said —

AF: That's like a punitive thing, yeah. Corrective treatment.

APM: You met Robin.

AF: School children.

APM: He's asked if the auto inflation technique and associated devices are helpful for glue ear sufferers and is manual therapy useful as in lymphatic drainage, for example.

AF: In terms of auto inflation, well, adults can auto inflate better than kids can but there is a little device called an Otovent balloon and there's recent NICE guidance which suggests that it does actually work although I'm slightly skeptical over it, the thought that what you're doing is forcing air up the Eustachian tube on the basis that it might improve his functionality. I always liken it to treating infertility by forcing air up a fallopian tube but the evidence seems not incredibly strong but there is some evidence that it works. So these Otovent balloons, some kids can find it fun. So they hold one nostril closed and there's a little balloon at the end of the little device and they try and blow it up. So that auto inflates that side.

APM: And there is no way of addressing the Eustachian tube side of the problem rather than the tympanic membrane.

AF: Well, that's effectively...yes; It's what's called.

APM: More direct, yeah.

AF: It's what's called Politzerization where Adam Politzer, historical ENT chap, designed the Politzerization where you're actually forcing air up there. So it's essentially what you're...you're trying to improve it by forcible means, the Eustachian tube function.

APM: If you've got a child with glue ear and you try to force air into the Eustachian tube, surely, aren't you going to increase the pressure on the wrong side of the —

AF: No because it's a negative middle ear pressure. So what you want to do is auto inflate.

APM: Even though it's full of glue or —

AF: Well, no, that's fine because what that does...see, that might be why it's working is not so much improving the Eustachian tube. You're just putting a bit of air up and equalizing pressure. So just a little aside, when you've got a cold...and this happened to me. I remember I felt terribly sorry for this child behind me on the airplane. We're coming down on the airplane, big 747 type plane and I could feel the pressure rising, I had a cold, in my left ear and the pain got worse and this poor child was screaming behind me and I think, "Well, this child has got it worse than I have." And eventually, the pain became so great, I performed an auto inflation and the relief, it made her squeak. The relief was just amazing and I was thinking, "I can't tell this child to do the same thing."

APM: Well, that's just interesting you say that. That was how I perforated my eardrums. I couldn't auto inflate on a descent from a flight across to Ireland and I felt the eardrum go and that was a blessed relief as well.

AF: But it's the same principle with scuba diving when you're auto inflating to go deeper. When you're coming down an airplane, the cabin is re-pressurizing.

APM: I've got some rather interesting questions here. I have no idea what this is. This questioner, thank you for the question, whoever you are, has Mal de Debarquement Syndrome and do you have any recommendations for that. I have no idea what it is.

AF: That's a difficult one. Right, OK. So for the audience, Mal de Debarquement, the typical presentation there is that someone comes off a boat or...

APM: I see, yes.

AF: Or an airplane sometimes or even a car and they feel dizzy and they feel unsteady and that when they get back on the boat or back in a car, they feel better again. So when they're traveling, they're all right. When they're not traveling, they feel terrible.

APM: So the translation is a sickness of disembarkation rather than —

AF: Yes.

APM: That makes sense.

AF: Hence the term. And they're incredibly difficult to treat. In fact, I know Professor Luxon at Grayson's road had a series of patients with Mal de Debarquement. It's good to make the diagnosis because it actually explains to the patient why ENT surgeon's not getting them any better. In my experience, I never made one better at all. I've sent them for vestibular rehabilitation exercises and nothing works. I've given them labyrinthine sedatives like Stemetil, cinnarizine, nothing works and I think it's a very depressing condition.

APM: Perhaps whoever it was who sent in that question might give us some more information about what exactly it's like, what has or hasn't worked in their case. A question here about...I'll read it out. Can we ask about otalgia in correlation with BPPV, migraine with aura and a different type of headache? Because this person has two patients or has a patient with two discreet types of headache with otalgia and separately, BPPV.

AF: In a sense, quite a lot of that was covered with our talk earlier on but otalgia and migraine, yes, one can have otalgia with migraine. It's unusual but it happens. The other thing to think about with otalgia, if the ear is...of course, you have to examine the ear. Assuming the ear looks normal, they're not filled with otitis externa...because that can cause migraine and even BPPV if it's been around for a while. So check the ear out but that will be my first

recommendation. And the other thing about ears is that it's actually difficult to determine whether an ear is abnormal or not and it took me years to look at eardrums to work out whether something's abnormal.

APM: I'm glad you said that.

AF: It is. It's very difficult even for ENT surgeons. Sometimes they get it wrong and I'll be the first to admit it, you know. You think it looks normal, it's not but you get better at it but only through seeing a lot of normals but make sure that you know that it's all right, there's someone who knows. If you've got that in that situation, make sure the ear's OK. Make sure they don't have TMJ dysfunction, so temporomandibular joint dysfunction, very common cause of ear ache in the absence of ear pathology and the other thing is to think about referred pain from the neck. That's well within your remit of the audience, that C2-3, so upper cervical root pain often manifest as earache. We see that quite commonly. Dental pain —

APM: And we would associate commonly with headache as well.

AF: Yes, because it applies sensation to the temple and the other thing which...between 40 and 80-year-old smoker, drinker, always think, "Could this unilateral ear ache with a normal ear be something sinister?" So cancers in the base of tongue and hypopharynx, so don't forget those.

APM: I mean you reminded me there, to talk about provocative factors in children. I mean are there social factors that can predispose them to otitis media or glue ear as well?

AF: I think recurrent otitis media is an affluent kind of society condition but glue ear seems to be ubiquitous. Interestingly, the demographics of cholesteatoma is different. In India, it's much more common, a different type of chronic middle ear disease. We see it here —

APM: I've got a question about that actually and if I can just find it, perhaps we can address that one. I put it on my little list here. Is it possible that a chronically retracted eardrum would likely cause or predispose a cholesteatoma?

AF: Well, that's one of the theories as to why cholesteatoma happens, that there's a retraction pocket in the upper part, the attic part of the eardrum, not the central or pars tensa but the pars flaccida which is at the top because the anatomy of the middle ear...so if I can show it on this diagram, so this bit here is the attic area, so at the top. And so with most retractions, the vast majority of retractions will come in through this bit of the middle ear but if there's retraction right at the top, so there might be an erosion of that little bit of bone, that's called the scutum and then it might demonstrate that there's chronic inflammatory problems right at the top here. There might be destruction of the ossicles. So a description of cholesteatomas, as it's been

mentioned, is skin in the wrong place. So skin on our bodies is supposed to be there but skin should not be held within bony cavities and when that does happen, it forms enzymes and can be destructive to the bone. So it can, in its worst state, cause erosion through this bone here, the tegmen, which is the roof of the middle ear and this, is Dura. So you're not a million miles from the brain, from the temporal lobe. So we call it safe retractions down here and the unsafe are up here and they're the ones that you want to check out there isn't cholesteatoma or skin. It doesn't look like skin on the surface of our bodies but it has a sort of whitish, keratotic plaques. They're little flakes and it's quite...it smells awful because all of those sort of enzymes that eroded the bones. There's a very characteristic smell about it.

APM: Can I take you back to BPPV for a second? Somebody's asked whether it's possible for a sufferer to hear the particles moving when you carry out these tests or when they move their own head? She says that...she or he says that somebody has reported they hear a trickling sensation.

AF: I don't think that's possible. I don't think it is, no because those particles are fairly microscopic. There is a condition, however, called dehiscence superior semicircular canal. This is the superior semicircular canal. Remember, I told you about the posterior one for BPPV and some people described...now, it's a rare condition but where the bony bit of this is missing, so that the actual fluid is...not so much it spills out but because there's a membrane but there's no bony covering. So what happens in that situation, there's a heightened awareness of their own body sounds and they describe being able to hear their eyes move.

APM: Oh, gosh. And that's...

AF: The superior semicircular canal dehiscence.

APM: And that's a reasonable assumption that they're correct or could there be other —

AF: If they say, "Oh, look..." They don't often say because quite often, they think, "Oh, everybody should be able to hear their eyes move."

APM: It's weird. Of course they wouldn't know it's any different.

AF: Of course, it sounds very strange to us but if it's always been the case...but if they offer it up then you say, "Well, actually..." You can look for it. It's a common cause of dizziness and Tullio phenomenon. Now, Tullio phenomenon is where a loud noise causes dizziness. So think about Meniere's disease, think about congenital defects of the inner ear and the other is superior semicircular canal dehiscence.

- APM: There's a lot to think about. A question here about your opinion on the effect of allergies and intolerances on the inflammation of the Eustachian tube and therefore, leading to otitis media. The question is, "Is it time to approach the subject by treating the cause rather than the effect? And should children have things like allergy tests prior to other intervention?"
- AF: It's against the NICE guidance to do allergy tests or to treat with antihistamines because the evidence isn't there that food intolerances and primary type one atopic allergy syndromes relate to cause...directly cause the glue ear and also that there's...the evidence is against the utility of antihistamines and —
- APM: You've done quite a bit of work on allergies yourself I think, haven't you? So in what context have you done that? Just allergies generally as opposed to relating to specific conditions?
- AF: I have specific interest in allergy. I also run an allergy immunology, rhinology clinic with Dr. Pereira who's an immunologist, that we run this specialist clinic at The QE2 hospital. And so they're always fascinating as we see a lot of medical...difficult medical conditions and things that we want to...we want to try and get a one-stop shop treatment where we want to have an ENT perspective and an immunology or allergy perspective. So quite a lot of allergy exposure.
- APM: I'm just reminded by a note that's been sent to me that I actually have a patient who...I have a contact, a friend who can hear her eyes move. My mother-in-law can hear her eyes move. I wasn't aware of that but nobody believed her until she saw an ENT consultant apparently. So thank you for that, mom-in-law. This is a bizarre question, "Why do I sneeze like crazy for a few minutes when I wake up?" asks Claire.
- AF: Some people sneeze as a reflex to something or other. Now we normally think of...traditionally, we think of sneezing as allergic rhinitis and I suppose that's one of the things we could think of, to think, "Well, is there an allergic rhinitis?" Maybe and that a simple allergy test could be useful.
- APM: Upon waking? I mean why would it happen on waking specifically?
- AF: Well, that's difficult to know, really and it would seem to go against an allergic hypothesis. Again, these things are often reflex oriented. So if it's a neuro...if it's an autonomic type reflex then there might be a cyclical element to that or even just the fact that the waking, the cortisol levels change and so on and so forth. So there might be a complex reason for that but the treatments usually center around topical nasal steroids, which can be taken at night before one, goes to bed. That might work.

- APM: We've got some people with medical dictionaries and thesauruses in tonight I think because I've now been asked to...it's a simple statement, eagle syndrome, unusual variant, styloid-carotid syndrome, how could this be screened for? Is it something we need to be thinking of?
- AF: Controversial condition, eagle syndrome. It's where the styloid process is elongated and the styloid process comes off the base of skull and the point...it actually is in contact with the internal carotid artery and the actual point of it is in contact with the superior constrictor muscle at the tonsil bed. So the theory is that it could be a cause of throat pain and I have performed excision of the styloid process on two patients over my time and that's quite a long time.
- APM: To good effect?
- AF: One of them sort of worked and the other was completely...didn't help at all but making this diagnosis is very difficult because you're in the realms of what is causing this pain? You have to make sure it's not a cancer. That's your number one. Deep rooted throat pain, make sure that isn't sinister pathology. If you've really excluded that, think about x-ray. Just a plane x-ray and I do too many plane x-rays in ENT. Just look at the length of the styloid process. If they're long...sometimes you can feel them just by popping a gloved finger on the tonsil bed and you can feel the point of the styloid process. If it's very prominent then why not give it a go? Take it out. It's —
- APM: But you said it's controversial because —
- AF: Not everyone agrees with it. That's the other one. I don't know if you've got it there. It's Sluder's neuralgia.
- APM: Haven't got that one.
- AF: Where the septum's in contact with the termina. Again, one of these controversial things.
- APM: I was really hoping...I teased my audience long before we started this with your views on cranial osteopathy and glue ear.
- AF: I think you were...asked a question there but we kind of didn't get on to the answer of that about the transmission of fluids.
- APM: Well, we talked about lymphatic draining.
- AF: Lymphatic draining, yeah.
- APM: It's not quite the same thing. In fact, not the same thing at all, really but I know you said earlier on that you're more familiar with osteopaths than

chiropractors. Now, osteopaths have craniosacral techniques. Chiropractors have sacro occipital techniques, which, forgive me chiropractors, I believe means the same thing as craniosacral techniques. What have you seen in terms of the effectiveness of craniosacral techniques in treating those sort of conditions in children?

AF: I've heard of it. I haven't witnessed it. I have witnessed it. I witnessed it being performed on one patient with glue ear and I was intrigued by the...this is not a mainstream medical thing. It doesn't mean to say that it doesn't work. I suppose I should say that I have a degree of skepticism over it but that doesn't mean...again, it doesn't mean to say it doesn't work but the thought of moving fluids with one's hands through manipulation to improve certain conditions, I don't quite get the logic of it. Now, that doesn't mean...that might be a reflection on me more than anything else but there was one cranial osteopath and I said, "Well, I quite like to study this," because there's so little published work on the effectiveness of cranial osteopathy and ENT conditions. And so he was very excited at the prospect of a study. He said, "Yeah, I'd love to be involved in that," and I said, "OK, well, look, just thinking about the study design, it has to be a robust study design," and I said, "What we could do is randomize children with glue ear into two groups, one, you do your proper maneuver and the other is that you do a sham maneuver." And the fellow's face drops and shook his head. "Well, is there a problem with that?" He said, "Yeah, I don't think I could do that." "What do you mean?" "Well, I don't think I could possibly do a sham maneuver because I think just my...whatever I do will make the child better."

APM: That doesn't.

AF: So I thought, "Well, look —"

APM: I'm being generous, that does make research very difficult if the person you spoke to didn't feel there was a way of putting in, you know, a controlled element in a trial.

AF: Well, he thought that just by the fact that he's doing it is going to improve the child.

APM: Anecdotally, as I mentioned to you earlier on, I did speak to the Osteopathic Centre for Children about this and I asked about their success in treating glue ear and they were very honest about it. They admitted that the research isn't there. They're very honest about what they think they're doing and how they can influence the movement of cerebrospinal fluid, the bones of the skull and anecdotally managed to resolve a glue ear in cases...repeated chronic glue ear in cases where the grommets haven't worked but it's an anecdotal story and I don't know how we ever get that through trials because there's a lot of expense involved in running trials which osteopaths generally can't find. Drug companies and so on have much more weight there.

AF: I have a question for any osteopaths that use cranial osteopathy —

APM: We've got a few minutes left, so please.

AF: And that question is how many of your patients get better whom you perform cranial osteopathy for glue ear? What's your success rate?

APM: And I can't answer that because I'm not a cranial osteopath.

AF: I don't know if anyone in the audience could do that.

APM: It'd be interesting, wouldn't it?

AF: Because in terms of...one has to be able to demonstrate...to prove something, it requires repeatability and blinding and...that you can show effect beyond blinding. The problem with glue ear as with so many chronic conditions is that they tend to get better. So if you look at a population...so you see, for me, the placebo effect has been fantastic. Patients have loved me because they got better on the treatment that I've given them because they spontaneously got better and I know that and it's nothing to do with me. It's just that they got better that they like me because they made—

APM: We don't poo-poo the placebo effect.

AF: --an association of what they've done to the improvement. So that's why a robust study is needed and that's why it's not good enough to say, "Well, look, in my case, I sorted out a condition...I sorted out Meniere's disease with a particular maneuver and feeling great about it," when actually, who knows? It could've got better anyway.

APM: Could you give us a one-minute burst on tinnitus? Do you treat tinnitus yourself?

AF: I do. Tinnitus is a physiological condition. It's natural. We all have it. If we sit in a quiet enough room, we have it. If we're exposed to noise, we've been to the nightclub, we come out, it's there. It's because it's a physiological amplification noise that comes from our brain. Now, I can hear mine now. Whenever I talk about tinnitus, I can hear my own and I'm really not aware of it until I talk about it and what amazes me...so the volume level of my tinnitus which is quite loud, how can something that loud be not noticeable? And now I'm thinking about it, it's becoming even louder, reaching crescendo pitch. Not that it worries me because I don't ever let it —

APM: For some people, it is clearly very stressful.

- AF: They can be really, really stressful. So the important thing with tinnitus is is there a pathology? Is there an infection? Something simple that you can clear up. Do they have a hearing loss? So the thing is that when there's normal levels of hearing, there's enough ambient noise to mask out your own tinnitus noise but in the situation where there's a hearing loss, it's not quite so easy to do that. So the analogy is you put on your amplifier at home, your stereo, you can hear the hum of the amplifier. You play the music and even though the hum is still there, you can't hear it because the music's masking out the hum. So that's when we've got normal hearing. We've got enough ambient noise to mask out our internal noise but in that situation, where there's a hearing loss, treat the hearing loss. Hearing aids, sometimes white noise generators can do it, easy. If you get it at night, play music. There's a 24-hour awful news TV these days, keep that going. Music. I'm sure there's a classic FM. Just keep it going. Just don't listen for that noise and another analogy is you move into a house and there's a railway just in your garden and the trains go by and it drives you insane, "I can't live like this," and then after a while, the train's going, you don't even notice it.
- APM: We are rapidly running out of time but there's one question that has come in which I've been wanting to follow up myself. We mentioned earlier on that you are a very proficient chef and you've written books on the subject. You're actually a lead guitarist in a funk soul band as well. It's astonishing what some people can do, isn't it? But we put out on one of our....
- AF: It's keeps me sane.
- APM: We put out on one of our Twitter post that this evening was about how to boil an egg and how to treat glue ear or something like that and somebody said, "Well, go on then, how do you boil an egg?"
- AF: Two easy ways. One is boil up a pan, take your egg at room temperature, put it in the pan gently, 3 ½ minutes, take it out. There you go.
- APM: Soft boil.
- AF: Soft boiled egg. If you want hard-boiled, 11, 12 minutes. Now, what if your egg has been in the refrigerator? Warm it up to room temperature and some people put the egg into the water and then boil it. I never really understood why they do that because there's so many variables involved. Reduce your variables but one perfect way of dealing with a boiled egg is this fellow here called the SousVide. Now this SousVide is not as expensive as it looks. It's a water bath and you set your temperature here and you can...egg confit, if anyone's ever eaten egg confit, how gorgeous it is. Put in your water bath another bowl, fill it with oil and then if you want to poach your eggs perfectly then you crack your...so build the temperature up to 63°, crack your eggs in, poach it in the oil and you can keep it indefinitely at 63°.

APM: Fantastic. I think that's a very interesting way to end this performance, perhaps I need to buy your book which is called Hosting an Elegant Dinner Party, subtitled The Surgeon in the Kitchen and it is available from Amazon, of course. It does bring us to the end of this broadcast and we covered quite a wide range of subjects here. We've demonstrated the Epley maneuver. I hope that's useful to you in clinic. I have got some other questions, which are on my list; I haven't had time to go through. I will try to get some answers from them and post them on the website a bit later on but for now, thank you very much for coming in this evening, Adam.

AF: Thank you —

APM: It's been very entertaining and enjoyable and informative for all of us.