Case No 1.

Case referred as an emergency.

Dear Doctor,

Thank you for accepting this five-year-old boy to ENT. I think that he has a subperiosteal mastoid abscess secondary to otitis media.

He has a five-day history of increasing left ear pain and a tender swelling over his left mastoid. His right eardrum looks a little dull on inspection but the left one is red and bulging. He has a fever of 38.5C, a pulse of 110bpm.

PMH. He was born prematurely following a difficult pregnancy during which his mother contracted toxoplasmosis. He spent a week in SCBU. Neonatal screening was inconclusive and follow-up audiometry was not attended.

He has had difficulties with his hearing over the last two years and failed a school screening test on two occasions. Unfortunately, he DNA'ed a previous appointment in ENT for assessment of his hearing. His speech is fine but his teachers are worried about his progress at school and he often seems withdrawn from social activity.

FH. He is one of five children. They are all well apart from a 15 year-old sister who was born completely deaf in one ear.

I started oral Amoxicillin three days ago when he came to clinic but he isn't improving. I am concerned that he has developed a mastoid abscess and that this needs draining.

Thank you for your assistance,

Dr Luc Citelli MBBCh, GP Registrar.

Questions about the case:

1. On arrival to hospital under your care, what is your first concern? What process will you start?

2. This letter follows an SBAR format. What is SBAR?

3. Setting aside the current episode, the child has a number of risk factors for deafness. What are these? (4 suggested in the history)

4. What is neonatal screening and how is it done?

5. The child has a subperiosteal mastoid abscess according to the referrer. This is one complication of acute otitis media. Name 5 others.

6. What other general concern do you have about the child and how would you address it?

Case No 2.

Emergency phone call from GP at bedside of patient with acute, severe, vertigo. 2am.

Good Morning, Mr. Johannes its Dr. Muller here, the duty on-call for the local GP practice.

I'm with a 24-year-old man who is extremely vertiginous and has nausea and vomiting. His vertigo is worse whenever he moves and he is more or less immobile in bed.

Just to give you some background, this is the first time that he has had vertigo and he is usually pretty fit and well apart from some grumbling problems with recurring ear infections. His GP has been giving him ear drops for recurring left otitis externa for a few years now. His ear is usually very bad smelling during an attack but he doesn't get much in the way of ear pain with it. The drops clear up the smell nicely. He always has some deafness on the left though.

PMH. Nil in the past and no obvious family history of vertigo.

Examining him he looks pale and sweaty and he is very reluctant to move. He has nystagmus but it is difficult to tell which way its going. I haven't got any tuning forks with me, I'm afraid. I had a look in his ears but couldn't see very much because he wouldn't move to allow examination. His pulse is around 110 but there is no fever and BP is normal.

In summary, I think that he has a diagnosis of vertigo. Can you admit him for hydration please? He looks quite dry.

Many thanks,

Dr. Muller, Out of Hours GP.

Questions:

1. The patient appears to be suffering with recurring ear infections. What is the differential diagnosis for this? Give 3 suggestions.

2. The patient also has left-sided hearing loss that appears to persist despite treatment. The doctor didn't have tuning forks with him. What would tuning forks show if, (a) this was a sensory deafness, (b) this was a conductive deafness?

3. Assuming that his vertigo is caused by left-sided ear disease, which way will the nystagmus beat?

4. When treating OE, what options work best when the ear drum is visible?

5. What if the eardrum is not visible and the ear canal is completely closed by oedema?

6. Is the doctor correct with his diagnosis?

Case No 3.

Adult with sudden onset SNHL. Letter from GP to ENT as routine.

Dear Doctor,

Thank you for seeing Mr. de Klevn. He is a 46-year-old man who has come to me with a history of severe deafness in his right ear. He hasn't got any other symptoms apart from some tinnitus in the right ear since the deafness started. He has not had vertigo, otalgia or otorrhoea.

He says that he awoke with both of these problems eight days ago. There is no obvious sense of a viral infection and he hasn't hit his head or been exposed to loud noise.

His eardrum looks normal and his tuning fork tests showed Weber to lateralise to the left side. Rinne's was positive on both sides.

His tinnitus is causing him more distress than the hearing loss at the moment and he hasn't slept much. He's getting quite fraught and has been tearful, according to his wife. There is a history of reactive depression in the past but he is not on medications now.

Many thanks for your help,

Dr. W.R. Wilson. MD.

Questions:

1. The tuning fork tests reveal which type of hearing loss, conductive or sensorineural?

2. The GP has referred this as a routine case. Is this reasonable? Justify your answer.

3. Define tinnitus. How common is it in a general population?

4. Give a differential diagnosis for sudden sensory deafness. 4 causes will be sufficient.

5. Are there any treatments for sudden sensory hearing loss?

6. Once you have seen the patient and confirmed a sensory deafness, which test should you order?

7. How is tinnitus managed?

Case 4.

Letter to ENT OPD.

Dear Colleague. This 14-year-old young lady has a persistently discharging left ear and has done so intermittently for a number of years. It briefly clears up after antibiotic spray only to recur soon after.

I wonder if she has an underlying perforation that would account for her longstanding and recurrent symptoms, and would be grateful if you would see her regarding this possibility.

(No other information supplied)

Many thanks.

Dr. Locum

1. What other information could have been supplied by the doctor to help you triage the referral as routine, urgent or urgent suspected cancer?

2. If this recurring infection is caused by a perforation, what would the tuning forks show?

3. Is it safe to used topical antibiotics in the presence of a perforation?

4. What operation might be offered to the child if she has a perforation

5. Typically, what is the discharge caused by an infection like?

6. How might the history be different if the cause of her problems were a cholesteatoma?

Case 5.

GP to ENT as routine case.

Dear Richard Gacek,

Thank you for seeing Mrs. Forster, a 78-year-old lady who is independent and living alone. She gives a history of vertigo for the last few years and it is causing her to lose her independence. She finds that her balance is poor in the daytime and especially at night she bumps into things. She has stumbled a few times and bruised her arm and hip recently, when she fell.

She says that her dizziness is worse at night as she gets into bed. It sometimes wakes her up as well. Last week she lost her balance while she was taking her washing in from the garden. During her attacks of dizziness, she has no change in hearing or tinnitus, no headaches or visual hallucinations and no other neurological symptoms. She has no neck pain and no history of vascular disease. She has a history of osteoporosis and Vit D deficiency.

Examination of her ears was normal and she had no spontaneous or gaze-evoked nystagmus. Cranial nerves are normal. Her hearing is a lot poorer over the last few years but she does not want a hearing aid yet.

She became very dizzy during a Dix-Hallpike test but this only lasted about 30s.

Many thanks,

Mr. R Gacek.

Questions:
1. Mrs. Foster has symptoms that are classic for which vestibular disease?

2. What is the most likely cause for her hearing loss?

3. Why is this history not typical of Ménière's Disease?

4. What is the significance of the findings during a Dix-Hallpike test?

5. Why should this lady be prioritised as urgent?

6. What treatments might be offered when she gets to see the ENT Department?

7. Optional question: What singular contribution did Gacek and Gacek make to the management of this disease in 1994?

Case 6.

ENT to ENT as a routine case.

Dear Dr. Prosper,

Please see Mr. Alex Tumarkin. He is a 43-year-old man working in Bootle General Hospital who is disabled by attacks of vertigo. These last several hours and he goes to bed to try and sleep through them. He is known to suffer Migraine but these attacks of vertigo do not correspond with his headaches at all. He is getting around 2 attacks each week and has recently been suspended from his work as a surgeon due to his sick leave requirements. He says that his hearing goes about 5 minutes before an attack but it comes back to normal afterwards.

In addition, more recently he reports having sudden falls. These occur without warning. He does not lose consciousness or have any other neurological symptoms with the attack.

He is on a tryptan for his migraine but takes no other medications.

Examination of his ears was completely normal today. I did an ECG and this was normal and routine bloods are also normal.

I think that he has Ménière's Disease.

Thank you for your help. He really is quite desperate and needs to drive for work.

All the best,

Mr. H. Zalin. FRCS.

Questions:

1. In what ways are Ménière's and Migraine similar?

2. What medication and lifestyle advice could the GP give to the patient to help with his problem?

3. What non-ear diseases may cause recurring bouts of dizziness?

4. If simple measures fail to assist, what surgical options are there for helping the patient?

5. What advice should the GP give to the patient about his driving?

Case 7.

GP to On-call FY1.
Case details: otitis externa / perforation not visible, otorrhoea. Otomycosis.

Re. Mr. D. Schwimmer.

Dear Dr. Ross

You will recall that we spoke last week about my patient with otitis externa. He had pain in his ears, a slight discharge and a conductive hearing loss.

Following your helpful advice on the phone regarding Mr. Schwimmer's ear problems, I prescribed an antibiotic ear spray (Otomize). Initially, this worked very well and his symptoms of pain, deafness, and discharge resolved quickly. His ears looked completely normal when I saw on Friday. However, in the last few days he has called me again saying that his ears have become intensely itchy.

I took a look today and it looks like he has wet newspaper in there. He is an inveterate fiddler with his ears but he denies putting anything into his ears and I am at a loss to explain his symptoms.

I am most grateful for your seeing him and cleaning his ears out.

Grazie mille,

Dr. Pier Antonio Micheli

Questions:

1. Recurring otitis externa is sometimes called swimmer's ear because it is common in water sports enthusiasts. What simple advice can you give to a patient with recurring problems regardless of the cause?

2. Topical antibiotics are commonly prescribed without bacterial swabs being taken. Why is this justifiable?

3. Which commonly used topical antibiotic often causes a type 4 hypersensitivity problem?

4. In addition to topical hypersensitivity, antibiotic usage can encourage fungal otitis externa (otomycosis). What are the common infecting fungi?

5. How is otomycosis treated?

Case 8.

Phone call from A&E to Dr. Acre, ENT on call

A&E. 'I'm down here with a 76-year-old man with severe dizziness. He has had it for a few hours now and is pale, sweaty, nauseated and vomiting at times. He is very reluctant to move at all. He is a well-controlled hypertensive, uses warfarin for AF, and has some history of claudication. His chest is fine and routine bloods, temperature, BP and O2 sats are all in normal range. We've given him some prochlorperazine and this has eased his symptoms a bit but he is incapable of going home.'

Dr. Acre. 'OK. Has he had any hearing change or ear pain or discharge?'

A&E. 'No, nothing at all. The dizziness came without warning this afternoon.'

Dr. Acre. 'OK. Does he have any nystagmus?'

A&E. 'I think so. His eyes seem to be bouncing around all over the place.'

Dr. Acre. 'One last thing. Are there any symptoms or signs suggestive of a stroke?'

A&E. 'We thought of that but his CT head is normal. We think that it is an inner-ear problem.'

Questions:

1. The patient has sudden onset, severe vertigo without hearing changes. When examined, his eardrums were normal and his nystagmus was left-beating. Which is more likely a stroke or acute inner ear disease such as vestibular neuritis?

2. What do the terms; timings, triggers and associations mean in relation to vestibular history taking?

3. What is the ‘timing’ in this case? What about a trigger?

4. What will the nystagmus show if this is a left-sided inner ear condition?

5. What is the vestibulo-ocular reflex and how is it tested?

6. Further question: what is the likelihood of a CT showing a CVA within the first few hours of onset of symptoms?

Case 9.

Letter from the GP to ENT.

Dear Dr Shah,

I would be grateful if you would see this 6-year-old boy who is suffering with hearing loss. His mother says that he cannot hear at home and school have complained about his behaviour at times. He gets occasional ear infections during the winter and we prescribe Amoxicillin when he attends with these. He has had a couple of episodes of purulent, inoffensive discharge from the right ear as well and these usually occur with his infections.

Examination finds him well today but his drums are dull in appearance. Ear canals are fine.

Thanks for your help.

Dr. Goode, MBBCh

Questions:

1. What is the commonest cause of acquired deafness at the age of 6?

2. Is this a conductive or sensory deafness?

3. Should the GP always treat these infections?

4. He gets episodes of ear infection during the winter and these are associated with aural discharge that is plentiful and yellow but is not offensive in smell. What is the likely cause of these infections?

5. What is the impact on a child of having hearing loss?

6. What treatments exist for deafness in children?

Case 10.

Letter from GP to ENT

Dear Dr. Jones

Mrs J is an 83-year-old lady that has noticed difficulty in her hearing over the last year or so. As she lives alone it hasn't caused her many difficulties, however, she is now struggling to use the telephone to talk to her children. In other respects, she is well and has no balance issues or other ear symptoms.

In the past she has worked as a farrier and she is a keen cornet player, even now.

Other than a little tympanosclerosis, the ears are normal. Tuning forks are normal too.

I would be grateful if you would see her and organise a hearing test.

Many thanks,

Dr. Deng M.B.B.S. (Sudan)

Questions:

1. What is the hearing loss associated with age known as?

2. What other causes for hearing loss may she have based upon her history?

3. What would her audiograms look like in these two scenarios?

4. Why does the hearing loss of age cause difficulty hearing speech?

5. What rehabilitation will she be offered?

6. Optional question: What are sociocusis and nosocusis?