Preparing for the General Practice summative exams

A case-based framework approach

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GP Synergy
advancing medical training

Australian Government
Department of Health

AGPT

RACGP Fellowship Assessments

- 2 x Written Exams: Applied Knowledge Test (AKT) and Key Feature Problem (KFP)
- Clinical Competency Exam (CCE)

ACRRM Fellowship Assessments

- Procedural Logbook (online)
- Nine formative mini Clinical Evaluation Exercises (miniCEXs)
- Multiple Choice Questions (MCQ)
- Multi-source feedback (MSF)
- Case Based Discussion (CBD)
- Structured Assessment using Multiple Patient Scenarios (StAMPS)

All summative exams are presentation/case based questions and require application of knowledge and clinical reasoning

The clinical reasoning process

- a thorough but directed clinical history, with initial hypothesis generation and subsequent testing through specific questioning
- selection of a primary diagnosis and differential diagnosis in order of likelihood
- physical examination directed at gathering further data necessary to confirm or refute the hypotheses
- thoughtful and critical selection of investigations to gather additional data
- implementation of a targeted and rationalised management plan

http://www.racgp.org.au/afp/2012/januaryfebruary/clinical-reasoning/

Hidden aspect

- Is this piece of data important or irrelevant?
- Does this piece of data make the hypothesis more or less likely?
- How does the data interrelate with the other data already gathered?
- Which data is the most critical (both positive and negative)?

http://www.racgp.org.au/afp/2012/januaryfebruary/clinical-reasoning/

Case study

Michael Stevens a 59 year old male, attends the practice as a fit in on the day with a 2 day history of feeling dizzy. He describes a sensation that is similar to stepping off a playground merry-go- round. He was last seen by another doctor in your practice 5 months ago for a BP check which was normal. Michael has a past medical history of hypertension, hypercholesterolemia and gastroesophageal reflux disease for which he takes, perindopril 10mg orally daily, atorvastatin 10 mg orally daily and esomeprazole 20 mg orally daily. He has no known allergies and no significant family medical history. Michael works as a boiler maker.

On examination, Temperature is 36.7 oC, blood pressure is 130/85 mmHg, heart rate is 78/min regular, respiratory rate is 14/min and body mass index is 32kg/m2.

What is your problem representation?

Problem Representation

- ‘The one-liner’ at the end of a presentation
- For example: *A previously well, 2-year-old unimmunized girl presents with an acute history of respiratory distress. She is febrile, looks unwell, and is drooling*
- Semantic qualifiers – acute/chronic, severe/mild, localized/diffuse, previously healthy/significant PMH

http://pediatrics.aappublications.org/content/130/5/795

Problem representation

A 59 year old male presents with acute vertigo for the last 2 days. He has a background of hypertension, hypercholesterolaemia, gastroesophageal reflux and obesity. His medications include perindopril, atorvastatin and esomeprazole. Vital signs are within normal limits.

Illness Scripts

- An illness script is an organised mental summary of a provider’s knowledge of a disease.

- Illness scripts often include a disease's pathophysiology, epidemiology, time course, salient symptoms and signs, diagnostics, and treatment.

http://www.sgim.org/web-only/clinical-reasoning-exercises/illness-scripts-overview

Illness script example 1

1. 16-year-old boy.

2. Admitted for acute abdominal pain.

3. Has poor PO intake.

4. Pain started around his umbilicus but has moved to the RLQ.

5. Febrile to 39.4°C.

6. Has associated nausea, vomiting, and anorexia

http://pediatrics.aappublications.org/content/130/5/795

Illness script example 2

1. 8-year-old boy

2. Admitted for acute abdominal pain

3. Has poor PO intake for the past day

4. Has a purpuric rash in a waist-down distribution

5. Presents with large joint pain

6. Has proteinuria on urinalysis

http://pediatrics.aappublications.org/content/130/5/795

Case study

Michael Stevens a 59 year old male, attends the practice as a fit in on the day with a 2 day history of feeling dizzy. He describes a sensation that is similar to stepping off a playground merry-go- round. He was last seen by another doctor in your practice 5 months ago for a BP check which was normal. Michael has a past medical history of hypertension, hypercholesterolemia and gastroesophageal reflux disease for which he takes, perindopril 10mg orally daily, atorvastatin 10 mg orally daily and esomeprazole 20 mg orally daily. He has no known allergies and no significant family medical history. Michael works as a boiler maker.

On examination, Temperature is 36.7 oC, blood pressure is 130/85 mmHg, heart rate is 78/min regular, respiratory rate is 14/min and body mass index is 32kg/m2.

Differential diagnosis

- What is the most likely diagnosis for Michael's presentation?
- What is the most important diagnosis to consider for Michael's presentation?
- What differential diagnoses should be considered for Michael's presentation?

Question Qualifiers:
- Initial
- First line
- Definitive
- Immediate
- Most likely
- Most common
- Most important
- Next most important

What differential diagnoses should be considered for Michael's presentation?

Generating a differential diagnosis using a framework

Murtagh's PROMPT diagnostic strategy

Probability Diagnosis
Red Flags – Infection, Infarction, Malignancy, Metabolic (serious disorders)
Often Missed (pitfalls)
Masquerades
Patient **T**elling me

Anatomic region

Physiologic mechanism

Organ system

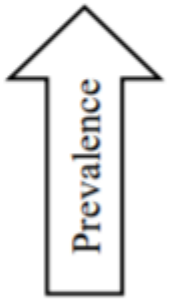
Syndrome

V	Vascular
I	Infection
N	Neoplastic
D	Drugs/Toxins
I	Inflammatory/Idiopathic
C	Congenital
A	Autoimmune
T	Trauma
E	Endocrine/Environmental
S	Something Else/pSychological

Diagnostic checklists

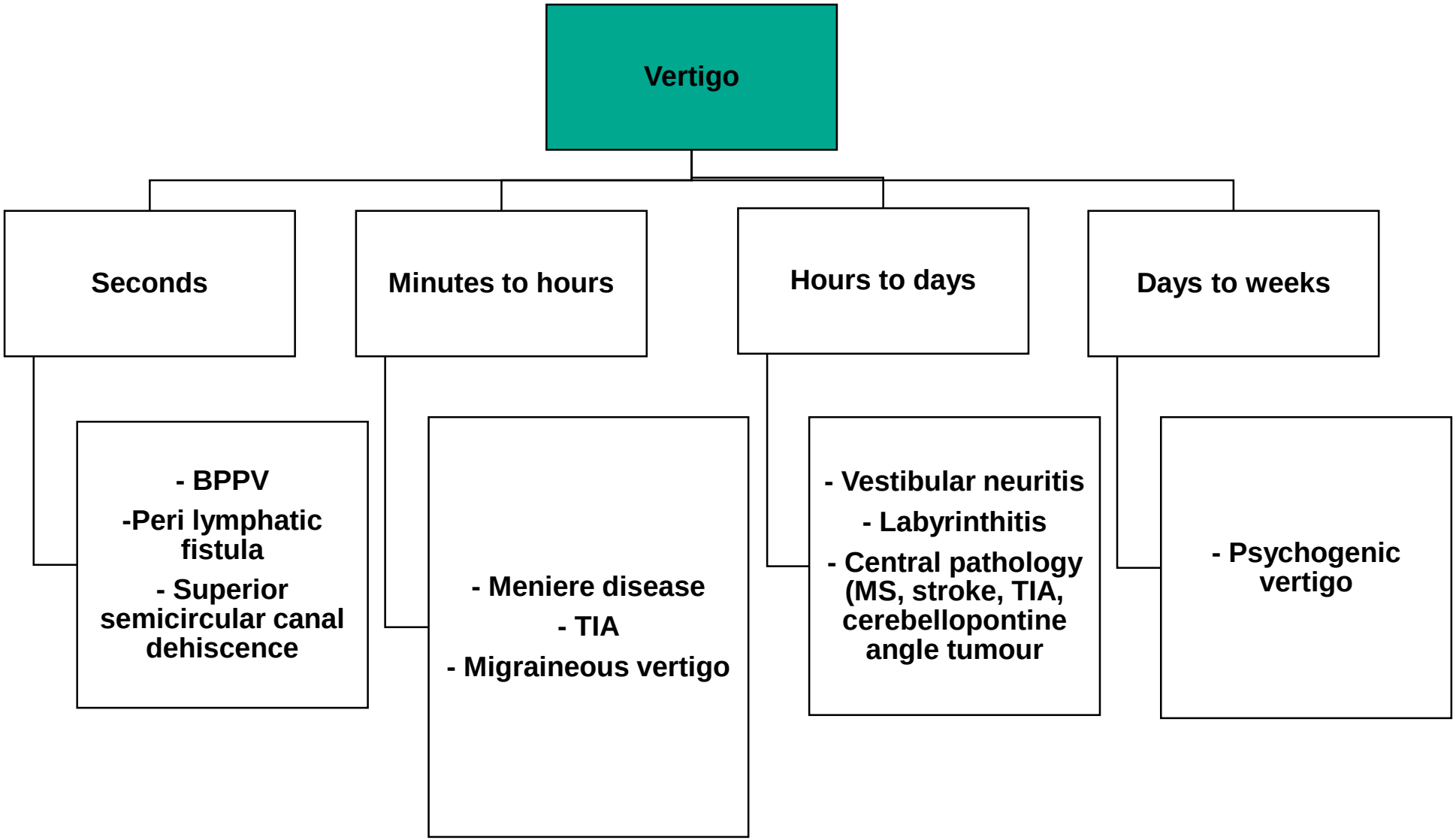
Abnormal uterine bleeding (2/13/15)

Anovulatory bleeding, polycystic ovary syndrome
Menorrhagia (idiopathic)
Contraceptive related abnormal bleeding (oral contraceptives, depo-medroxyprogesterone, intrauterine device, progestin implant)
Normal variations (postmenarchal, perimenopausal, premenstrual spotting, postmenstrual spotting, midcycle ovulatory bleeding)
♠Ectopic pregnancy
♠Intrauterine pregnancy complication
♠Endometrial cancer, hyperplasia
Uterine polyps
Uterine fibroids
Adenomyosis
♠Endometritis
Hyperprolactinemia
Thyroid disease
Drugs (anticoagulants, psychotropics)
Coagulopathy (von Willebrand disease)
Organ failure (late manifestation: kidney failure, liver failure)

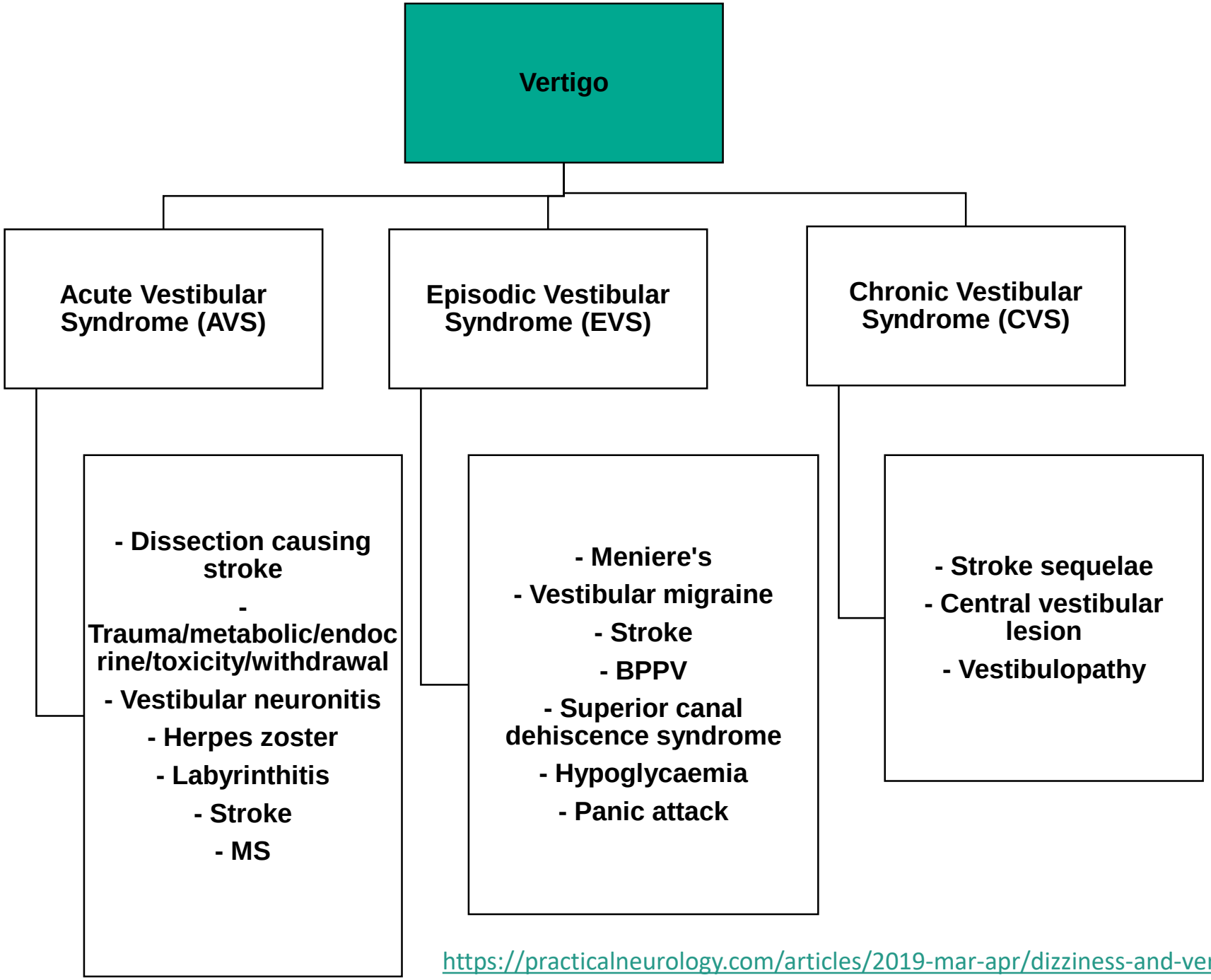


♠ Don't miss
*** Commonly missed**

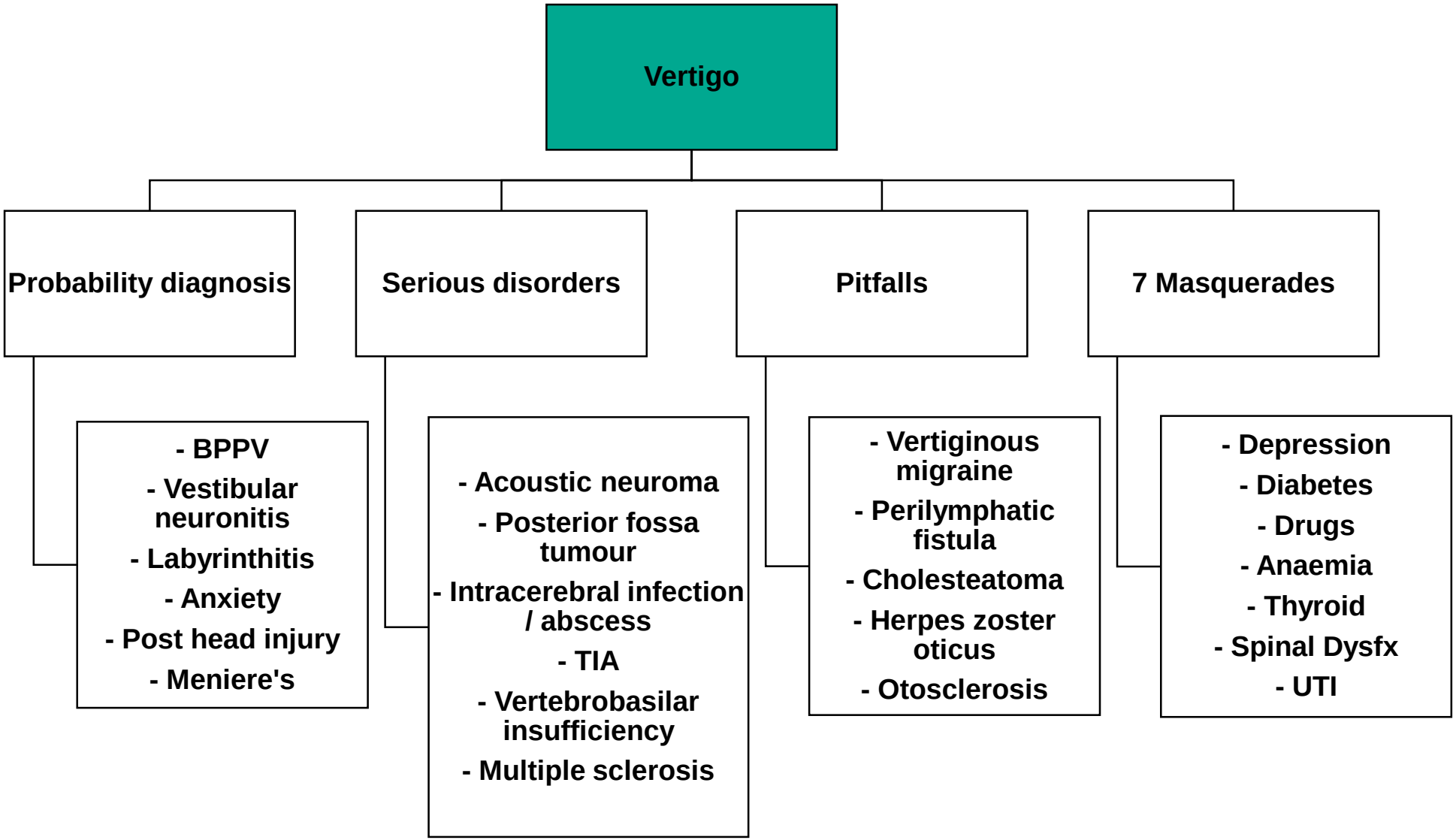
https://pie.med.utoronto.ca/DC/DC_content/DC_checklist.html



https://www.racgp.org.au/afpbackissues/2008/200805/200805kuo.pdf



https://practicalneurology.com/articles/2019-mar-apr/dizziness-and-vertigo


Vertigo
Probability diagnosis
Serious disorders
Pitfalls
7 Masquerades
- BPPV
- Vestibular neuronitis
- Labyrinthitis
- Anxiety
- Post head injury
- Meniere's
- Acoustic neuroma
- Posterior fossa tumour
- Intracerebral infection / abscess
- TIA
- Vertebrobasilar insufficiency
- Multiple sclerosis
- Vertiginous migraine
- Perilymphatic fistula
- Cholesteatoma
- Herpes zoster oticus
- Otosclerosis
- Depression
- Diabetes
- Drugs
- Anaemia
- Thyroid
- Spinal Dysfx
- UTI

History

- What further aspects of history should be obtained regarding Michael's presentation?
- What red flags were important to consider in this consultation?
- In establishing a diagnosis for Michael's presentation, what further history should be elicited?

Question Qualifiers:
- Initial
- First line
- Definitive
- Immediate
- Most likely
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- Most important
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Tip – you can extend the doctor by considering hypothetical situations in relation to different contextual factors:

- Aboriginal health context
- Presence of red flags
- Rural or remote context
- Differences across the age range
- Differences between genders

Illness Scripts

Differential diagnosis	Key features	
	Demographics	History
Benign Paroxysmal Positional Vertigo (BPPV)	Most common cause of vertigo in clinical practice Affects all ages (especially the elderly) Female to male (2:1)	Recurs periodically for several days Brief episodes of vertigo (10-60 seconds) +/- nausea Triggered by rapid changes in position of the head Symptoms can last for weeks and recur after remission Attacks are not accompanied by vomiting, tinnitus or deafness
Acute Peripheral Vestibulopathy (Vestibular neuronitis or Labyrinthitis)	Young adults to middle age	Acute vertigo + Nausea + Vomiting = Vestibular Neuronitis Same symptoms + hearing loss +/- Tinnitus = Acute Labyrinthitis Preceding viral infection (mumps and Duration: Hours to days, provoking: change in head position
Meniere syndrome	Uncommon cause of vertigo Commonly seen in women, incidence increases in men and women after the age of 60	Vertigo + vomiting + tinnitus + sensorineural deafness Episodes of vertigo lasting longer than 20 minutes and aural fullness. Eventually hearing loss becomes permanent Provoking factors: spontaneous Variable interval between attacks (twice a month to twice a year
Vestibular Migraine	Relatively common but underdiagnosed Vertigo commonly accompanies migraine, occurring in about 25% of unselected migraine patients	Personal history or family history of migraine Vertigo with or without headaches The attacks of vertigo can occur before or during the headache, and may also occur during the headache-free interval
TIA/Stroke	The population-wide prevalence of TIA symptoms in adults in the US is approximately 2.3%. This varies by age with 2% prevalence for patients in the 55- to 65-year age range, rising to 5% for people over 85 years. TIAs are more common in males	Vertigo is the most common symptom of TIA in the vetebrobasilar distribution. Sudden intense vertigo, nausea, and vomiting Cardiovascular risk factors (smoking, diabetes, obesity, hypertension, hypercholesterolaemia) Weakness/Dysarthria/Sensory changes/Ataxia/Confusion Hiccoughs and dysphagia (lateral medullary syndrome)

Key features from stem
55 year old
Vertigo
2 day history
HTN/Hyperchol/GORD/ obesity
ACE/Statin/PPI
NKDA
Nil family history
Vitals within normal

Examination

- What were the key features you looked for on examination and why? Include relevant positive and negative results.
- What physical examination findings should be sought for Michael's presentation?
- What features on examination should be elicited to determine if Michael requires admission?
- Describe how to perform the following examination…

Question Qualifiers:
- Initial
- First line
- Definitive
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- Most important
- Next most important

What physical examination findings should be sought for Michael's presentation?

Consider how useful a positive or negative physical examination finding is in refining the differential

Is this piece of data important or irrelevant?

Does this piece of data make the hypothesis more or less likely?

How does the data interrelate with the other data already gathered?

Which data is the most critical (both positive and negative)?

SORT: KEY RECOMMENDATIONS FOR PRACTICE

CLINICAL RECOMMENDATIONS	EVIDENCE RATING	REFERENCES	COMMENTS
Use the Dix-Hallpike maneuver to diagnose BPPV.	C	7,10	The Dix-Hallpike maneuver has a positive predictive value of 83 percent and negative predictive value of 52 percent for the diagnosis of BPPV.
Do not use laboratory tests to initially identify the etiology of dizziness.	C	10	Laboratory tests identify the etiology of vertigo in less than 1 percent of patients with dizziness.

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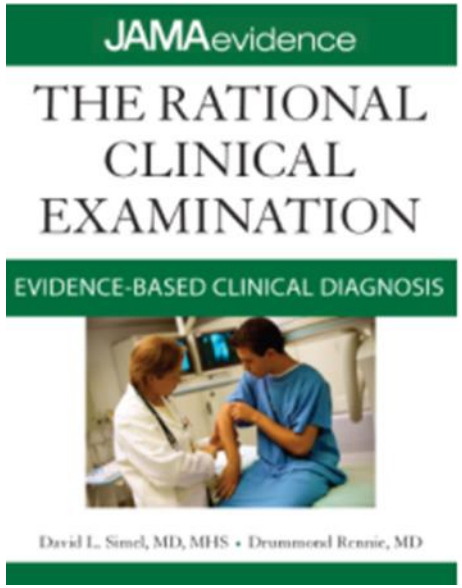
Temporal Arteritis

Diagnostics and Likelihood Ratios, Explained

Positive Findings (Patient Has This)

Finding (Sign/Symptom/Lab/Study)	Number Needed to Diagnose (Positive Likelihood Ratio)
Beaded temporal artery	4.6×
Prominent or enlarged temporal artery	4.3×
Jaw claudication	4.2×
Diplopia	3.4×
Absent temporal artery pulse	2.7×
Tender temporal artery	2.6×
Any temporal artery abnormality	2.0×
ESR > 100 mm/h	1.9×
Scalp tenderness	1.6×

https://www.thennt.com/lr/temporal-arteritis/



https://jamaevidence.mhmedical.com/book.aspx?bookId=845

https://www.aafp.org/afp/2006/0115/p244.html#afp20060115p244-b10

GP SYNERGY

Illness Scripts

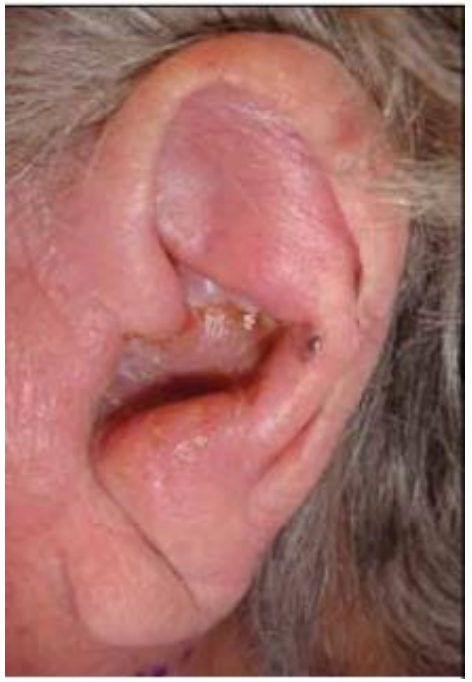
Differential diagnosis	Key features
	Examination
Benign Paroxysmal Positional Vertigo (BPPV)	Positive Dix Hallpike Manoeuvre (video) https://youtu.be/kEM9p4EX1jk Nystagmus seen in BPPV has a rotational nature
Acute Peripheral Vestibulopathy (Vestibular neuronitis or Labyrinthitis)	Nystagmus (rapid component away from lesion) HiNTs test: https://geekymedics.com/the-head-impulse-nystagmus-test-of-skew-hints-examination/ Head impulse test https://youtu.be/Wh2ojfgbC3I
Meniere syndrome	Nystagmus only during an attack (side opposite to affected ear) Sensorineural deafness (low tones)
Vestibular Migraine	Normal
TIA/Stroke	Dependent on site – full neurological examination nystagmus present and may be bilateral or vertical (suggesting a central cause), head impulse test is negative, patients usually cannot stand without support

What are the following examination findings suggestive of?

A.

https://www.racgp.org.au/afpbackissues/2008/200808/200808chang.pdf

B.



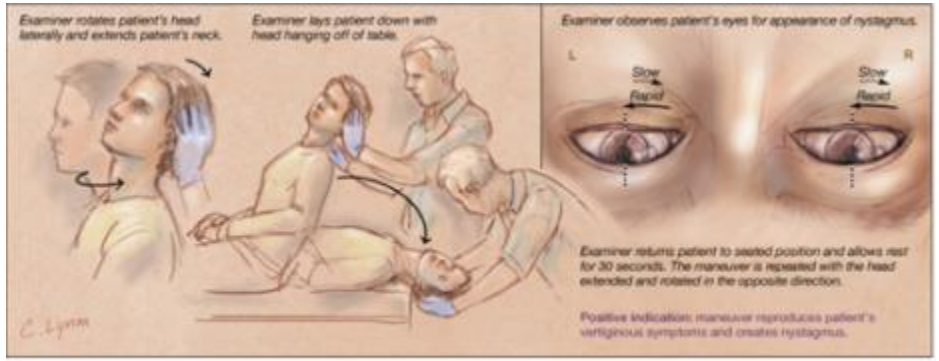
https://www.racgp.org.au/download/documents/AFP/2011/May/201105yeong.pdf

Describe how to perform a Dix Hallpike

Dix-Hallpike test

1. Ask the patient to sit upright on the examination couch.
2. Adjust the patient's position so that when supine, their head will hang over the edge of the bed, allowing for head extension below the horizontal plane.
3. Position yourself standing behind the patient.
4. Turn the patient's head 45º to one side.
5. Whilst supporting the neck, move the patient from their sitting position to a supine position in one brisk smooth motion, ensuring their head hangs over the bed 30º below the horizontal plane. Ask the patient to keep their eyes open throughout this process.
6. Inspect the patient's eyes carefully for evidence of nystagmus for at least 30 seconds.
7. After a short break, the test should be repeated on the other side, turning the patient's head in the opposite direction during step

https://geekymedics.com/dix-hallpike-and-epley-manoeuvres-osce-guide/



Source: Simel DL, Rennie D: *The Rational Clinical Examination: Evidence-Based Clinical Diagnosis*: http://www.jamaevidence.com

GP SYNERGY

What are the components of a HiNTs test and how do you interpret it?

HiNTs test

- Head impulse test: https://www.youtube.com/watch?v=Wh2ojfgbC3I
- Nystagmus: https://www.youtube.com/watch?v=1q-VTKPweuk
- Test of skew: https://www.youtube.com/watch?v=1q-VTKPweuk

Interpretation: A positive head impulse test, uni-directional horizontal nystagmus and negative skew test is a negative HiNTs test, indicating the risk of a central cause is very low.

Investigations

- What first line investigations, if any, are appropriate for Michael's presentation?
- What initial investigations are appropriate for Michael's presentation?
- What is the next most important investigation to arrange for Michael's presentation?
- Describe the following investigation to your patient..
- Interpret this investigation..

Question Qualifiers:
- Initial
- First line
- Definitive
- Immediate
- Most likely
- Most common
- Most important
- Next most important

What first line investigations, if any, are appropriate for Michael's presentation?

Consider how useful a positive or negative investigation is in refining the differential

Is this piece of data important or irrelevant?

Does this piece of data make the hypothesis more or less likely?

How does the data interrelate with the other data already gathered?

Which data is the most critical (both positive and negative)?

SORT: KEY RECOMMENDATIONS FOR PRACTICE

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https://www.aafp.org/afp/2006/0115/p244.html#afp20060115p244-b10

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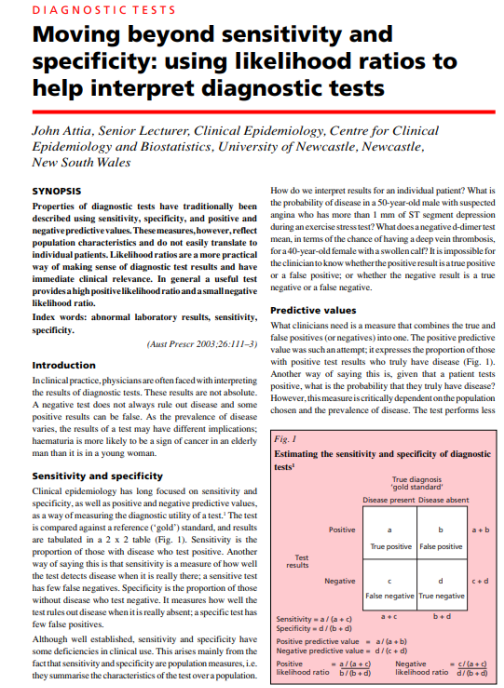


DIAGNOSTIC TESTS

Moving beyond sensitivity and specificity: using likelihood ratios to help interpret diagnostic tests

John Attia, Senior Lecturer, Clinical Epidemiology, Centre for Clinical Epidemiology and Biostatistics, University of Newcastle, Newcastle, New South Wales

SYNOPSIS

Properties of diagnostic tests have traditionally been described using sensitivity, specificity, and positive and negative predictive values. These measures, however, reflect population characteristics and do not easily translate to individual patients. Likelihood ratios are a more practical way of making sense of diagnostic test results and have immediate clinical relevance. In general a useful test provides a high positive likelihood ratio and a small negative likelihood ratio.

Index words: abnormal laboratory results, sensitivity, specificity.

(Aust Prescr 2003;26:111–3)

Introduction

In clinical practice, physicians are often faced with interpreting the results of diagnostic tests. These results are not absolute. A negative test does not always rule out disease and some positive results can be false. As the prevalence of disease varies, the results of a test may have different implications; haematuria is more likely to be a sign of cancer in an elderly man than it is in a young woman.

Sensitivity and specificity

Clinical epidemiology has long focused on sensitivity and specificity, as well as positive and negative predictive values, as a way of measuring the diagnostic utility of a test.[1] The test is compared against a reference ('gold') standard, and results are tabulated in a 2 × 2 table (Fig. 1). Sensitivity is the proportion of those with disease who test positive. Another way of saying this is that sensitivity is a measure of how well the test detects disease when it is really there; a sensitive test has few false negatives. Specificity is the proportion of those without disease who test negative. It measures how well the test rules out disease when it is really absent; a specific test has few false positives.

Although well established, sensitivity and specificity have some deficiencies in clinical use. This arises mainly from the fact that sensitivity and specificity are population measures, i.e. they summarise the characteristics of the test over a population.

How do we interpret results for an individual patient? What is the probability of disease in a 50-year-old male with suspected angina who has more than 1 mm of ST segment depression during an exercise stress test? What does a negative d-dimer test mean, in terms of the chance of having a deep vein thrombosis, for a 40-year-old female with a swollen calf? It is impossible for the clinician to know whether the positive result is a true positive or a false positive; or whether the negative result is a true negative or a false negative.

Predictive values

What clinicians need is a measure that combines the true and false positives (or negatives) into one. The positive predictive value was such an attempt; it expresses the proportion of those with positive test results who truly have disease (Fig. 1). Another way of saying this is, given that a patient tests positive, what is the probability that they truly have disease? However, this measure is critically dependent on the population chosen and the prevalence of disease. The test performs less

Fig. 1

Estimating the sensitivity and specificity of diagnostic tests[1]

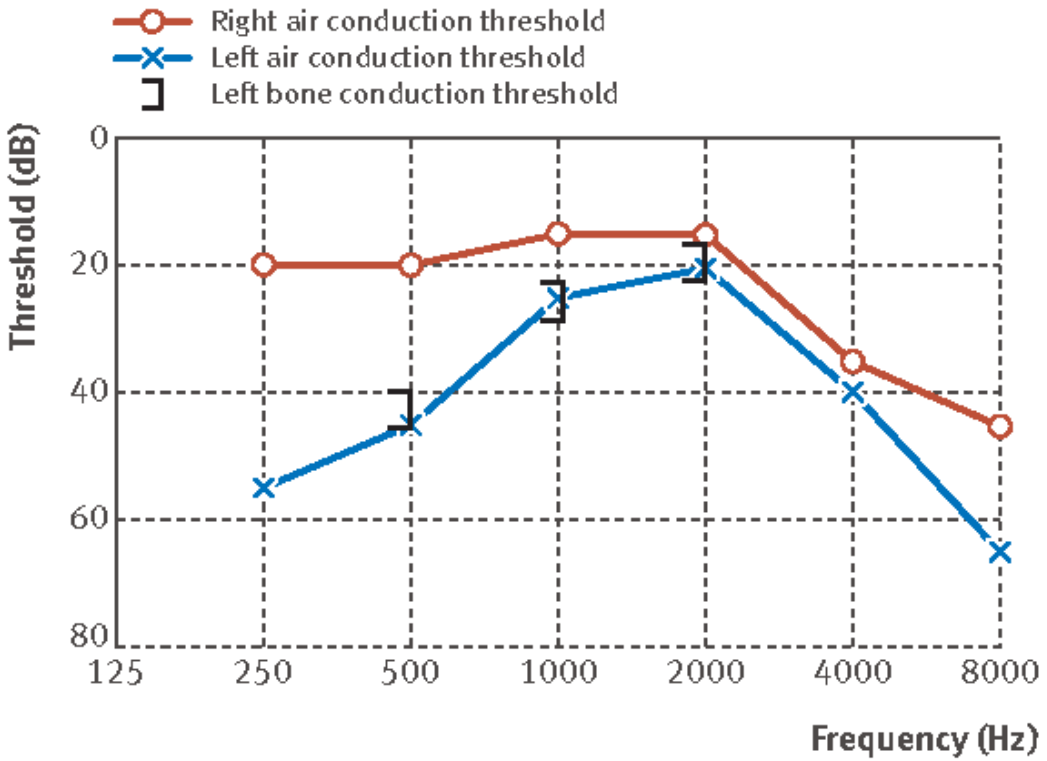
https://www.nps.org.au/australian-prescriber/articles/moving-beyond-sensitivity-and-specificity-using-likelihood-ratios-to-help-interpret-diagnostic-tests

GP SYNERGY

Illness Scripts

Differential diagnosis	Key features
	Investigation
Benign Paroxysmal Positional Vertigo (BPPV)	Nil required (clinical diagnosis)
Acute Peripheral Vestibulopathy (Vestibular neuronitis or Labyrinthitis)	If performed: Caloric stimulation confirms impaired vestibular function
Meniere syndrome	Pure tone audiometry most useful test to assess sensorineural hearing loss Caloric test: impaired vestibular function
Vestibular Migraine	There is no definite diagnostic test for migraine
TIA/Stroke	CT/MRI

Interpret this Audiogram



https://www.bmj.com/bmj/section-pdf/780002?path=/bmj/349/7983/Clinical_Review.full.pdf

Describe what a patient should expect with Caloric testing?

Caloric testing

- This test utilises warm and cold water irrigation of the ear canals to stimulate the organs of the inner ear.
- The responses are recorded by tracking the reflex eye movements using computerised video goggles.
- It is normal to feel dizzy during this test, the sensation is like spinning around quickly, then stopping. It passes quickly.
- The test relies on having clean ear canals, not obstructed by wax.
- Please avoid wearing eye makeup on the day of the test for clearer eye movement recordings.

http://nndx.com.au/tests.html

Further history

- The symptoms started 3 days ago when he bumped his head on an open cupboard door in the kitchen. At the time he experienced no loss of consciousness. He had a mild cold at the time which was nearly resolved.
- The next day when he woke, he experienced dizziness when he rolled out of bed which lasted a few seconds then settled.
- Since then the same sensation occurs looking up, for example getting something out of a high shelf, or sometimes while driving when turning to look behind him.
- Each time the sensation lasts only 10 seconds or so
- He denies headache, tinnitus, vision or speech problem, and has had no falls.
- **Neurological examination:** no nystagmus at rest, cranial nerves all normal, Romberg's normal, cerebellar testing normal, upper and lower limbs normal, gait normal, no tremor, hallpike's positive with head turned 45 deg to right
- **ENT:** normal

Management

- What non-pharmacological management actions are appropriate for Michael's presentation?
- What pharmacological management options are appropriate for Michael's presentation?
- What advice is important given Michael's presentation?
- What are the immediate management actions for Michael's presentation?
- Considering the most likely underlying cause for Michael's symptoms, what management actions should be arranged?
- What is the next step in management?

Question Qualifiers:
- Initial
- First line
- Definitive
- Immediate
- Most likely
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- Next most important

Considering the most likely underlying cause for Michael's symptoms, what management actions should be arranged?

Illness Scripts

Differential diagnosis	Key features Management
Benign Paroxysmal Positional Vertigo (BPPV)	Epley Manoeuvre (77% success rate an initial attempt and 100% on further attempts) video: https://youtu.be/mx1VoQtDquc Brandt daroff exercises: http://www.dizziness-andbalance.com/disorders/bppv/brandt/first.html Modified semont manoeuvre: www.neurology.org/content/vol63/issue1/images/data/150/DC1/video1.mpg Medication not recommended
Acute Peripheral Vestibulopathy (Vestibular neuronitis or Labyrinthitis)	Rest in bed, lying still Gaze in the direction that eases symptoms Short term symptom relief treatments: stemetil, diazepam, short course corticosteroid Early mobilisation in a safe environment Vestibular rehabilitation exercises If suppurative labyrinthitis is suspected – refer to ED for drainage of otitis media
Meniere syndrome	No cure, reassurance is necessary Acute attack: Bed rest, antiemetic + vestibular blocking agent (stemetil) Long term (minimal evidence): Low salt diet (<1-2g/day), diuretics (hydrochlorothiazide) Betahistine Severe debilitating vertigo: Surgical (Labyrinth ablation (intratympanic gentamicin injection, surgical repair or removal of labyrinth)
Vestibular Migraine	Lifestyle changes Routine migraine treatment and prophylaxis Symptomatic treatment of vertigo is often helpful. Acute migraine headache therapies such as the triptans may also be effective for vestibular migraine in some cases.
TIA/Stroke	Detailed assessment/urgent hospital referral Long term CV risk modification +/- anticoagulation

Use a framework

Management Domain	Management Steps
Patient education	Reassurance that BPPV is a self limiting condition Symptoms recur in 20 to 30% of cases Do not use prolonged medication for the symptoms of vertigo, because of the risk of neurological adverse effects
Non-Pharmacological	Particle repositioning manoeuvres (Epley manoeuvre, Semont manoeuvre) Exercise therapy (Brandt-Daroff exercises)
Pharmacological	Medications may relieve the nausea and vomiting associated with benign paroxysmal positional vertigo (BPPV),but do little for the vertigo. - prochlorperazine 5 to 10 mg orally, 6- to 8-hourly for up to 2 days - promethazine 25 to 50 mg orally, 8- to 12-hourly for up to 2 days (maximum daily dose 100 mg)
Referral	Referral to physiotherapist with expertise in vestibular rehabilitation therapy Referral to Neurologist
Safety net and follow up	Follow-up within 1 week Earlier if red flag symptoms develop

Therapeutic guidelines: Benign Paroxysmal positional vertigo

Describe how to perform an Epley manoeuvre?

Epley manoeuvre

When performing the **Epley manoeuvre**, each position should be maintained until full resolution of symptoms and nystagmus has been achieved for at least 30 seconds:

1. The Epley manoeuvre typically follows on from a positive Dix-Hallpike test, so we will assume the patient is still positioned lying flat, with the head hanging over the end of the bed, turned 45º away from the midline.

2. Turn the patient's head 90º to the contralateral side, approximately 45º past the midline, still maintaining neck extension over the bed. Keep the patient in this position for 30 seconds.

3. Whilst maintaining the position of the patient's head, ask the patient to roll onto their shoulder (on the side their head is currently turned towards).

4. Once the patient is on their side, rotate the patient's head so that they are looking directly towards the floor. Maintain this position for 30 seconds to a minute.

5. Sit the patient up sideways, whilst maintaining head rotation.

6. Once the patient is sitting upright, the head can be re-aligned to the midline and the neck can be flexed so that the patient is facing downwards (chin to chest). Maintain this position for 30 seconds.

The entire procedure can be repeated 2-3 times if needed, however, this will depend on whether the patient is able to tolerate further manoeuvres (as they often precipitate vertigo).

https://geekymedics.com/dix-hallpike-and-epley-manoeuvres-osce-guide/

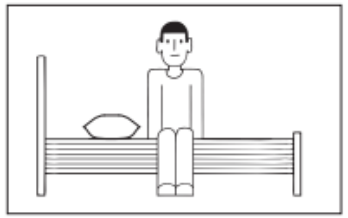
Therapeutic Guidelines

Epley manoeuvre for treating right-sided benign paroxysmal positional vertigo (BPPV)

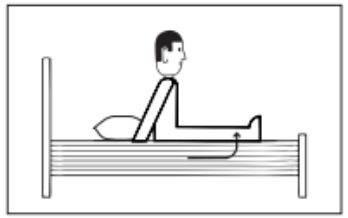
Patient instructions

Benign paroxysmal positional vertigo (BPPV) is caused by crystals collecting in one of the fluid-filled balance canals of the inner ear. This manoeuvre is designed to flush the crystals out of the canal—if you do it once a day, the dizziness usually goes away after a few days. The manoeuvre needs to make you feel dizzy if it's going to work. If you were prescribed drugs for nausea, do not use them for more than 2 days.

Do this manoeuvre once a day, preferably in the morning.



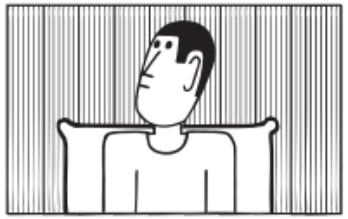
1. Put a pillow a quarter of the way down the bed. Sit in the middle of the bed.



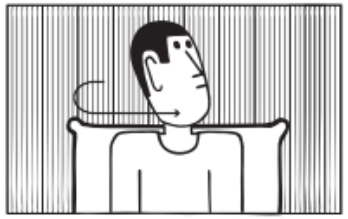
2. Swing your legs up onto the bed so they are straight out in front of you.

3. Look up and tip your head back slightly, then turn your head 45 degrees to the right.

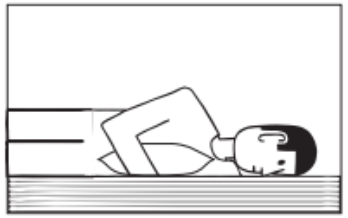
4. Keeping your head in this position, lie down so your head is over the top edge of the pillow (about 30 degrees below horizontal).



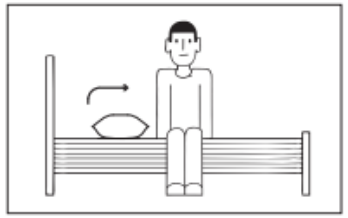
5. Hold this position for 1 minute.



6. Turn your head gently through 90 degrees from the right to the left. Hold this position for 1 minute.



7. Turn your head as far as possible to the left (about 90 degrees), at the same time as you roll onto your left side. Hold this position for 1 minute.



8. Sit up slowly. Don't lie down flat again until bedtime. You might have mild nausea or dizziness or feel unsteady for a few hours.

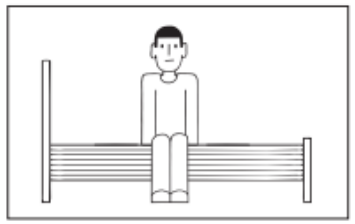
Therapeutic Guidelines

Semont manoeuvre for treating right-sided benign paroxysmal positional vertigo (BPPV)

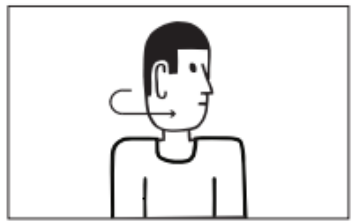
Patient instructions

Benign paroxysmal positional vertigo (BPPV) is caused by crystals collecting in one of the fluid-filled balance canals of the inner ear. This manoeuvre is designed to flush the crystals out of the canal—if you do it once a day, the dizziness usually goes away after a few days. The manoeuvre needs to make you feel dizzy if it's going to work. If you were prescribed drugs for nausea, do not use them for more than 2 days.

Do this manoeuvre once a day, preferably in the morning.

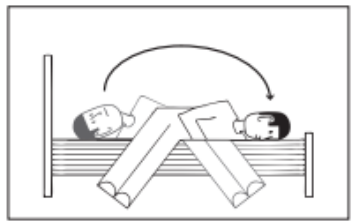


1. Take the pillows off the bed. Sit on the edge of the bed, in the middle.

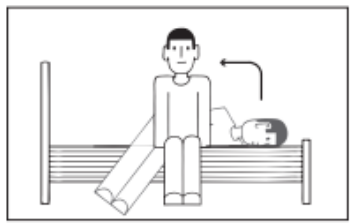


2. Turn your head 45 degrees to the left.

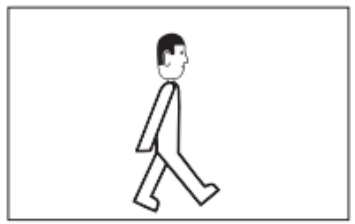
3. Keep your head in this position. Tip over on your right side, so your head is on the bed with your nose pointing slightly upward. Your legs are dangling over the edge of the bed. Hold this position for 1 minute.



4. Keeping your head in the same position, sit up quickly and tip over onto your left side in one continuous movement—your head is on the bed and your nose is pointing slightly downward. Hold this position for 1 minute.



5. Sit up slowly.



6. Don't lie down flat again until bedtime. You might have mild nausea or dizziness or feel unsteady for a few hours.

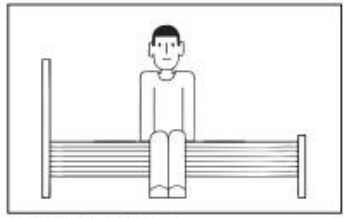
Describe to a patient how to perform Brandt-Daroff exercises.

Brandt-Daroff exercises

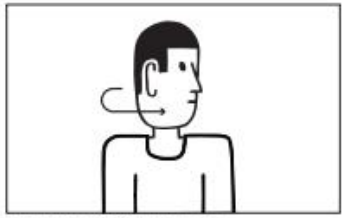
Therapeutic Guidelines

Brandt-Daroff exercises for treating benign paroxysmal positional vertigo (BPPV)

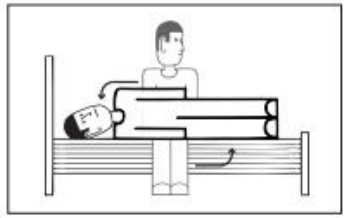
Benign paroxysmal positional vertigo (BPPV) is caused by crystals collecting in one of the fluid-filled balance canals of the inner ear. These exercises are designed to flush the crystals out of the canal—if you do them regularly, the dizziness usually goes away after a few days. The exercises need to make you feel dizzy if they're going to work. If you were prescribed drugs for nausea, do not use them for more than 2 days.



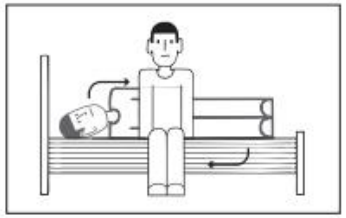
1. Take the pillows off the bed.
   Sit on the edge of the bed, in the middle.



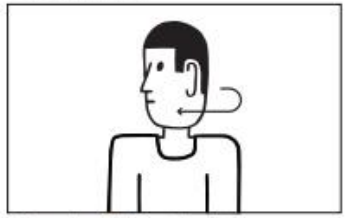
2. Turn your head 45 degrees to the left.



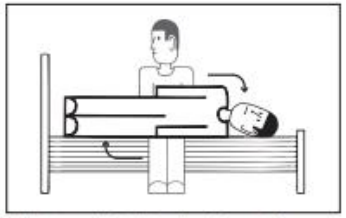
3. Keeping your head in this position, lie down quickly on your right side so the back of your head is resting on the bed.
   If you're dizzy, wait for this to go away. If you're not dizzy, wait 20 to 30 seconds.



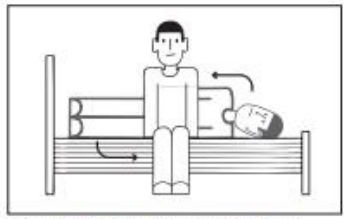
4. Sit up straight. If you're dizzy, wait for this to go away.
   If you're not dizzy, wait 20 to 30 seconds.



5. Turn your head 45 degrees to the right.



6. Keeping your head in this position, lie down quickly on your left side so the back of your head is resting on the bed.
   If you're dizzy, wait for this to go away. If you're not dizzy, wait 20 to 30 seconds.



7. Sit up straight. If you're dizzy, wait for this to go away.
   If you're not dizzy, wait 20 to 30 seconds.

Repeat the exercises for 10 minutes. Do the exercises at least 5 times on each side. If you can, do the exercises 3 times a day (in the morning, early afternoon and at night).

GP SYNERGY

Resources

- Case based discussion question generator: https://www.rcgp.org.uk/-/media/Files/GP-training-and-exams/WPBA/CbD/CbD-question-generator-for-GPs.ashx?la=en
- Cased based discussion article: https://www.cambridge.org/core/journals/advances-in-psychiatric-treatment/article/casebased-discussion/7CD2398A7098C7E13E30F0F026636D7A
- RACGP exam support program (GP Learning) – case based discussion module/CCE/Exam support online modules
- ACRRM handbook for Fellowship assessment: https://www.acrrm.org.au/resources/assessment/handbooks-guides
- The Society to Improve Diagnosis in Medicine (SIDM) website is full of information relevant to clinical reasoning. https://www.improvediagnosis.org/clinicians/
- Review the 'Getting It Right' case studies offered by the American College of Physician, designed to encourage you to think about your diagnostic decision-making. This link, https://www.acponline.org/cme-moc/online-learning-center/getting-it-right-cases-to-improvediagnosis, takes you to the American College of Physicians website where you create a free login to access the resource.
- Imreasoning podcasts

Questions