ED QUICK QUIZ

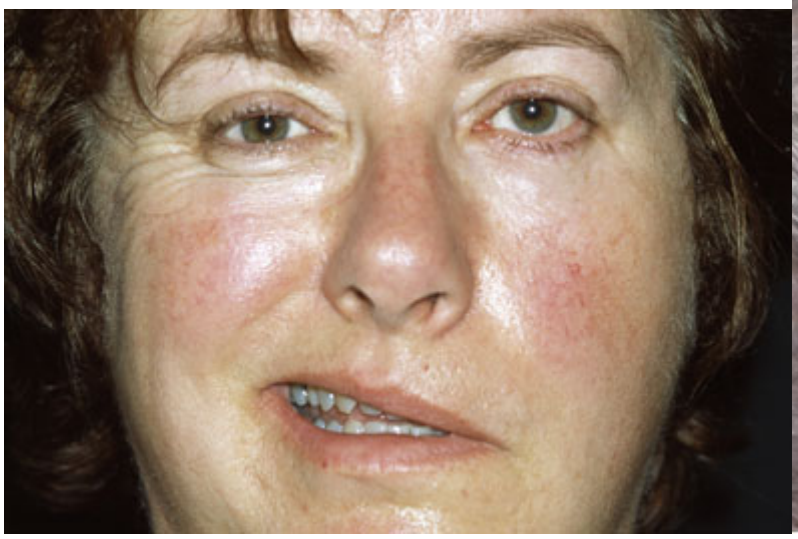
WHAT IS THE DIAGNOSIS?

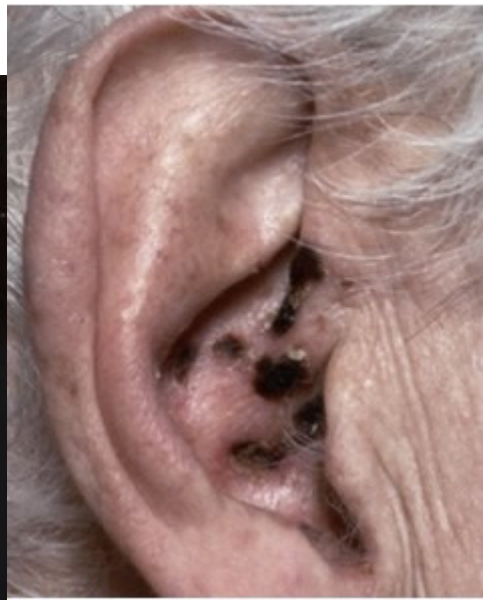
BACKGROUND

This 52 yrs old lady presents with left facial weakness and mild deafness in her left ear. She woke up this morning and noticed facial asymmetry when she looked in the mirror and also complains of altered sensation and numbness of the left face.

Observations are all within normal range. On examination there is left sided weakness including the forehead. She is unable to close her left eye fully. The rest of the CNs are intact, including formal assessment of trigeminal nerve (despite the feeling of altered sensation). There is an unusual rash in her left ear.

Investigations- glucose 4.9mmol/l.





QUESTIONS

1. **What is the diagnosis? Is it central or peripheral lesion?**
2. **What are the functions of the facial nerve?**
3. **What are the other causes of facial nerve palsy?**
4. **How will you examine this patient?**
5. **What is the treatment for this condition?**

ANSWERS & DISCUSSION

1. This patient presents with a left peripheral facial nerve palsy and vesicular rash. This is likely to be Ramsay Hunt Syndrome. It is important to exclude other causes of facial nerve palsy. In the history you would want to know about any history of trauma, systemic involvement, diabetes, other rashes and other neurological disturbance.

2. The functions of the facial nerve can be remembered as 'face, ear, taste and tear.' Face- muscles of facial expression. Ear- stapedius- dampens vibration of stapes controlling amplitude of sound. Taste- taste to anterior 2/3 of the tongue, Tear- parasympathetic supply to lacrimal glands.

3. It is important to distinguish between central and peripheral facial nerve palsy. Central lesions have forehead sparing, due to bilateral innervation of the upper part of the face. A patient with a peripheral facial nerve lesion will find it difficult to close their eye, raise their eyebrow or wrinkle their forehead on the affected side. If the patient is able to do this to the same extent on both sides they have a central (UMN) Lesion. Causes of UMN facial palsy include stroke, MS, cerebellar-pontine angle lesion. The commonest cause of peripheral facial nerve palsy is Bell's Palsy, which is defined as *'an acute idiopathic peripheral facial nerve paresis'*. Ramsay Hunt Syndrome is another cause and sometimes the rash of RH syndrome appears after the facial weakness. Other causes of LMN facial nerve palsy with systemic involvement are Lyme disease, HIV infection and sarcoidosis. Also, acute facial nerve palsy can occur in people with diabetes as a mononeuropathy. It can also occur as a result of trauma causing fracture to the temporal bone, which can be delayed 4-5 days after the injury.

4. On examination, check the observations normal as systemic involvement would suggest an alternative diagnosis. Examine the facial nerve- asking the patient to close their eyes tightly or wrinkle their forehead will quickly identify the source of the problem. Weakness of the forehead muscles indicates a peripheral facial nerve problem, whereas sparing of the forehead muscles is diagnostic of a central lesion. Are any other cranial nerves involved? Trigeminal nerve should be normal with subjectively reduced sensation caused by reduced facial muscle tone. Look for parotid mass or evidence of trauma. Examine carefully to look for a rash suggesting Ramsay hunt, which can appear as erythema initially. This is classically in the ear canal but can occur behind the ear, over the lateral neck, on the tongue or buccal mucosa, on the palate uvula or pharynx. In 15% of patients with Ramsay Hunt syndrome, vesicles develop after the onset of facial weakness. Check upper and lower limb for focal neurology. Check for any rashes, such as erythema migrans in lyme disease. In terms of investigations, a blood glucose level is required and further imaging if UMN facial nerve palsy is suspected.

5. The best evidence suggests that a combination of high dose steroids and aciclovir (e.g. prednisolone 60 mg once daily for 10 days and aciclovir 800 mg 5 times a day for 7 days) are associated with improved rates of recovery. To prevent complications, such as dry eye and exposure keratitis, the eye should be kept artificially moist with application of topical lubricant drops hourly during the day and ointment at night. The patient should also be taught how to tape their eye to keep it closed at night. Finally, ophthalmology follow-up must be arranged for any patient with incomplete eye closure. In addition, the patient must be counselled on the infectivity of the rash and potential risk to the non-immune and immunocompromised. In 15% of patients with Ramsay Hunt syndrome, vesicles develop after the onset of facial weakness and therefore patients diagnosed with Bell's palsy must be instructed to return or see their GP should a rash develop later. Patients should be advised to make a follow up appointment with GP +- ENT referral

References

1. NHS e learning for healthcare. Emergency Medicine. Acute facial Palsy. Dr Jon Whittaker.
2. ENT Emergency Treatment Room Ward 11B QEUH K Law August 2017