

Dr. William Detar:

Hello, welcome to the On-Call Consults In <10 Minutes series on ENT In a Nutshell, a compliment to Head Mirror's Online Survival Guide. I'm your host, Will Detar and today we are joined by Dr. Matt Carlson, a board certified neurotologist. In this episode, we will cover acute facial nerve paralysis. Let's jump right in.

Acute paresis or paralysis of the facial nerve is most commonly associated with a viral inflammatory process, but can also result from bacterial infections, such as otitis media, skull base osteomyelitis, malignancy, skull base neoplasms, trauma, or brainstem lesions. This episode will not cover congenital or perinatal facial paralysis from birth trauma. Dr. Carlson, can you talk to us about the differential diagnosis?

Dr. Matthew Carlson:

So the most common cause of peripheral facial nerve paralysis is idiopathic facial nerve paralysis or so-called Bell's palsy. This comprises about 75% of cases presenting. The second most common etiology in a differential diagnosis is Ramsay-Hunt syndrome also called zoster oticus. It can also be acquired from acute otitis media, chronic otitis media usually in the setting of cholesteatoma, malignant otitis externa or skull-based osteomyelitis, a malignancy of the parotid or surrounding skin or skull base, benign tumors in lateral skull-base including facial nerve schwannomas, jugular paragangliomas meningiomas, hemangiomas of the facial nerve or osseous hemaningioma, or less commonly vestibular schwannomas. Lyme disease or other tick-borne illnesses, sarcoidosis and neurosarcoidosis, trauma, stroke, either brainstem or supratentorial, and less commonly Melkersson-Rosenthal syndrome with facial nerve paralysis, recurrent oral facial edema, and a fissured tongue.

Dr. William Detar:

And what are some of the risk factors for facial nerve paralysis?

Dr. Matthew Carlson:

So pregnancy increases one's risk for acquiring Bell's palsy, temporal bone trauma or soft tissue trauma can result in facial paralysis. History of non-melanoma cutaneous malignancies oftentimes in the setting of immunocompromised status, the history of parotid malignancy or an immunocompromised host.

Dr. William Detar:

And how will these patients present typically,

Dr. Matthew Carlson:

Particularly for Bell's palsy, patients will present with acute facial paresis or paralysis of the facial nerve with an onset of less than 72 hours. In most cases they'll reach their nader in 24 or 48 hours. Facial paralysis that spares the forehead classically suggests a supratentorial stroke. Patients may also have concomitant facial spasm, otalgia, hyperacusis from stapedial muscle paralysis, dysgeusia or taste change, eye dryness or excessive tearing, a vesicular eruption of the external auditory canal and pinna suggestive of Ramsay-Hunt syndrome. Other concomitant cranial neuropathies generally excludes Bell's palsy and raises concerns for Ramsay-Hunt syndrome or a more aggressive process including neoplasm infection, or neurological process such as brainstem stroke. Otorrhea is concerning for malignant otitis externa or otitis media in the setting of facial nerve paralysis.

You may have a target rash concerning for Lyme disease. Hearing loss may be associated with otitis media or neoplasm of the skull base. Signs that are concerning for a neoplastic or malignant cause, and this is important, includes indolent progression. So somebody who acquires their facial nerve paralysis on the order of weeks, months, or even slowly over years. Somebody that has segmental involvement. So if they have just involvement over the upper division of the facial nerve you might be thinking of a parotid malignancy or a cutaneous malignancy. A lack of recovery after three months of onset. Bell's typically demonstrates recovery in weeks or months and certainly by three months, if you're not getting recovery by that period that suggests a more sinister pathology and if there's multiple cranial neuropathies. Bilateral paralysis is more concerning for Guillain-Barre, Lyme disease, meningitis, or neurosarcoidosis.

Speaker 3:

And what history should we be focused on for these patients?

Dr. Matthew Carlson:

We'll ask if it's unilateral or bilateral. Perhaps most importantly, we'll ask about the rate of progression. Again for a Bell's palsy it should present at its nadir in less than 72 hours and often shorter. You'll ask about associated symptoms as described above. A history of trauma. A history of similar events in the past. A vesicular eruption around the ear, the target rash. History of ear surgery or other known ear history. History of non-melanoma skin cancers. And associated symptoms including dizziness or symptoms of cranial neuropathy, fever, photophobia, altered mental status, diplopia, aphasia, dysarthria, headache, lethargy, et cetera, are suggestive of a more sinister underlying neurological process.

Speaker 3:

And can you tell us about the physical examination?

Dr. Matthew Carlson:

Physical examination you'll want to bring an otoscope to evaluate the ear canal, tympanic membrane, and middle ear. You want to evaluate for otitis media, ear canal drainage, or evidence of ear canal or middle ear mass. You'll evaluate for concomitant perichondritis, a rash involving the ear or ear canal which again, could suggest Ramsay-Hunt syndrome, or parotid swelling. You'll perform a full cranial nerve examination, including House-Brackmann score. You'll want to look for sparing of individual divisions or full involvement. You'll look at the surrounding skin of the face, cheek, upper neck, and scalp for malignancy. If they report any hearing loss you'll want to perform a tuning fork examination just because an audiogram is not readily available in the emergency department. You'll look for key features of malignant otitis externa such as exposed bone or granulation tissue in severe pain. Again idiopathic facial nerve paralysis, or Bell's palsy generally demonstrates a normal ear examination.

Speaker 3:

So I know the diagnostic workup is directed by a prioritized differential diagnosis, but can you tell us about those?

Dr. Matthew Carlson:

Acute facial nerve paralysis without any other concerning history or findings on examination is really indicative of idiopathic facial nerve paralysis. If again, if it has the timing of less than 24 to 72 hours. In those situations an MRI or another diagnostic workup is generally not indicated in the acute setting. If

you're worried about an infectious process or a neoplasm, a temporal bone CT scan would be indicated, or if you're trying to evaluate for trauma. The head CT may be indicated if there's concern for stroke. And in most cases an audiogram is not obtained unless hearing loss is also reported.

Speaker 3:

What is the acute treatment in this phase?

Dr. Matthew Carlson:

So your treatment is going to be largely directed towards your underlying diagnosis or your presumed diagnosis. Treatment of facial paralysis in the setting of otitis media or trauma is beyond the scope of this episode and it will be covered in greater depth in other episodes. With regard to treatment of Bell's palsy or idiopathic facial nerve paralysis typically high systemic steroid therapy using prednisone for seven to 14 days with taper and also use of a PPI for stomach prophylaxis is used. Use of antivirals is controversial but it's usually strongly considered in the setting of Ramsay-Hunt syndrome particularly if caught early. You'll always want to consider aggressive eye cares to prevent exposure keratitis. Consider a thin daytime drops or artificial tears and a thicker nighttime lubricant and eye moisture chamber during sleep, and this is particularly if they have difficulty with full eye closure and they don't have a good protective Bell's phenomenon with eye closure.

Speaker 3:

Can you tell us about the disposition and follow up for these patients?

Dr. Matthew Carlson:

Patients with uncomplicated idiopathic facial nerve paralysis can generally be managed on an outpatient basis. Timely follow up in clinic is valuable to ensure good eye cares are maintained and also to potentially consider electro-diagnostic testing if complete paralysis develops. Over 88% of patients with idiopathic facial nerve paralysis experience complete recovery, usually within the first three months.

Speaker 3:

And any counseling that we can give these patients when they're being discharged?

Dr. Matthew Carlson:

We always reinforce the need to maintain aggressive eye cares, exposure keratitis or eye complications are very preventable with the use of aggressive eye care. If they're a diabetic you'll want tight glucose control. Always want them to seek medical attention if other neurological symptoms develop.

Speaker 3:

And that concludes our episode on acute facial nerve paralysis for On-Call Consults In <10 Minutes. Thank you for joining us.