

Herpes zoster oticus involving several cranial nerves: A case report

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ABSTRACT

Ramsay Hunt syndrome type 2 is an infection of the head and neck caused by herpes zoster (varicella zoster) virus involving the facial nerve, less commonly, other cranial nerves might be involved. We report a case of Ramsay hunt syndrome type 2 in a 55 year old Female, with classic facial nerve palsy

and ipsilateral ear vesicles, which rapidly evolved to involve multiple cranial neuropathies (CN IX, X) and improved dramatically with antiviral therapy corticosteroids, and Physiotherapy.

Key words: Herpes zoster oticus, Cranial nerves

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INTRODUCTION

Herpes zoster or zoster or shingles or zona is a viral disease manifested as a painful, blistering skin eruption in a limited area on one side of the body.¹ Once it affects the ear it is designated as herpes zoster oticus. Ramsay Hunt syndrome is a variation of the above if ipsilateral lower motor neuron facial nerve palsy is present. Other cranial nerves like vestibulocochlear nerve, glossopharyngeal nerve and vagus nerve are rarely associated with Ramsay Hunt syndrome.² We present a case of Herpes zoster oticus associated with cranial nerves (CN) VII, IX and X.

CASE REPORT

A female patient aged 55 years came to ENT department with right sided ear pain with painful blisters over the pinna, external auditory canal and right cheek for 10 days. She also had hoarseness of voice, difficulty in swallowing which was more for liquids, nasal regurgitation of feeds for the same period. She had a deviation of mouth to right side, absence of wrinkles on the right side forehead, inability to close the right eye and epiphora. Her hearing was normal and she didn't have a similar

history in the past. She was able to recollect suffering from chicken pox when she was around 10 years of age.

On examination pharyngeal reflex was absent and there was palatal palsy. Videolaryngoscopy showed right side vocal cord palsy. The vesicular ulcer scraping was subjected to Tzanck smear which showed multinuclear giant cells with acantholysis. MRI brain was done and it ruled out tumors or space occupying lesions or cranial nerve lesions. The patient was diagnosed to be Herpes zoster oticus with CN VII, IX and X palsy.

The patient was put on intravenous nutrition and later switched over to ryles tube feedings. Antivirals in the form of tablet acyclovir 800 mg 5 times a day for 10 days. Methylprednisolone in a tapering dose over 2 weeks started. Facial nerve rehabilitation in the form of facial massage, special facial exercises like smiling, grimacing, whistling, etc., biofeedback training with a mirror were followed. Our patient got improved from all the cranial nerve palsies over 4 weeks.



Figure - 1



Figure - 2



Figure - 3



Figure - 4



Figure - 5



Figure - 6

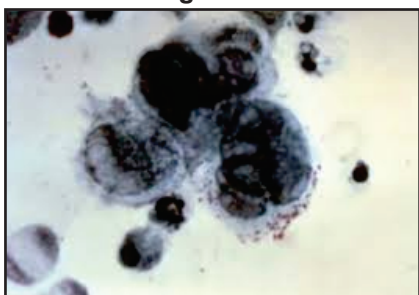


Figure - 7



Figure - 8



Figure - 9

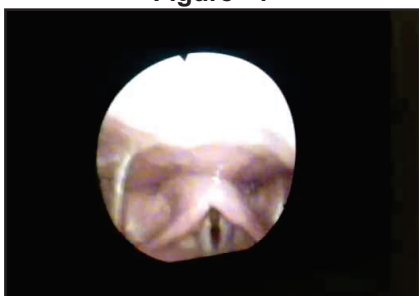


Figure - 10

01. Vesicular rash over right pinna and external auditory canal
02. Vesicles over right cheek
03. Right lower motor neuron facial nerve palsy
04. Right palatal palsy
05. Videolaryngoscopy showing right vocal cord in paramedian position during adduction
06. Videolaryngoscopy showing right vocal cord in paramedian position during abduction
07. Tzanck smear showing multinucleated giant cells
08. Recovered Facial nerve
09. Recovered Facial nerve
10. Videolaryngoscopy showing both vocal cords approximating and mobile

DISCUSSION

Varicella zoster virus, the infective organism responsible for chickenpox, can lie dormant in the geniculate ganglion for many years. It reactivates during stressful periods or during decreased immunity and then migrates along the nerve to the skin to multiply in number and causes painful vesicles.² Also it can spread through the vasa vasorum to the other nearby cranial nerves at the cerebellopontine angle and further. It is known to cause palsies to CN VII, VIII, IX and X.³ Herpes zoster oticus with CN VII palsy is known as Ramsay Hunt syndrome. Ramsay Hunt syndrome generally affects the old age population and manifests as otalgia, LMN type of ipsilateral facial palsy and vesicular lesions over the pinna.² Here our patient in her early fifties presented with similar picture. She also has loss of gag reflex, right palatal palsy and right vocal cord palsy indicating CN IX, and X palsy. Her hearing is normal with normal findings in tuning fork tests showing sparing of the CN VIII.

The diagnosis is based on history and clinical examination, but a Tzanck smear can be used to demonstrate the virus.⁴ The ulcer floor of the vesicle is to be scraped and stained to look for multinucleated giant cells and acantholytic cells. It is generally done for herpes virus, cytomegalovirus and pemphigus. Our patient showed a positive test confirming presence of herpes zoster. Also increasing antibody titers in repeated complement fixation tests, polymerase chain reaction (PCR) to detect varicella zoster virus (VZV) in vesicle fluid, saliva and tears can be helpful for diagnosis.

Treatment options include antivirals, steroids, facial nerve physiotherapy along with supportive management. Antivirals which can be used are acyclovir, famcyclovir, valcyclovir. These are

prodrugs which are DNA polymerase inhibitors decrease viral multiplication. Commonly used antiviral in this condition is acyclovir, but as this has a very low oral bioavailability, it has to be given in five times a day dosage. Steroid therapy with prednisolone has to be given starting at a full strength and is to be tapered for 2 weeks.⁵

The facial nerve palsy rehabilitation may include electrical nerve stimulation, facial neuromuscular exercises, facial massage, relaxation exercises, coordination exercises and emotional expression exercises. Our patient was put on all of these and she showed a good response to treatment. Facial nerve palsy recovered and her voice improved

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