Trigeminal Herpes zoster- A Case Report

Snehansu Pan

ABSTRACT

A thirty two years old female patient came to our clinic with papulo-pustular lesions due to varicela zoster virus infection over the left half of the face. The lesions were extensive over the lower part of the face and less over the upper part. Lesions were also present intraoraly involving tongue, check, lip , nostril etc . All the lesions were limited to the left half involving the areas supplied by sensory part of the trigeminal nerve. Thus the infection demonstrates the anatomy of the nerve.

Keywords: Herpes zoster, Trigeminal nerve

Department of General Surgery, WB Health University, Burdwan, West Bengal, India
Corresponding author mail: snehansu.pan@gmail.com

Conflict of interest: Nil

INTRODUCTION

Herpes Zoster virus infection affects a sensory nerve. The clinical manifestations are seen in an area of dermatome supplied by the nerve. This is because of the fact that the virus travels along the nerve and its branches. As such this clinical condition is a good demonstration of the supply areas of the nerve.

CASE REPORT

Case presentation: A thirty-two years old female patient came to our clinic with complaints of pain and papulo-pustular eruption over the left side of the face for last fifteen days. It was associated with fever and malaise. There was anorexia and vertigo. There was a history suggestive of chicken pox about twelve years back. On general examination, pulse 92/min. Temperature 99^0F.

Local examination of the face revealed redness, macular eruption ,areas of papules and pustular lesions over the left side of the face . There was extensive lesions over left mandibular, check, left half of upper and lower lip, left side of chin and left submandibular region. Lesions, to a lesser extent, was also found over the left zygomtic and left forehead region. (Figure 1)

Figure 1: Distribution of lesion over face

Finding that the lesions were present in the distribution area of trigeminal nerve, we wanted to see the oral cavity. With great interest we found that extensive lesions was present over the left half of the tongue, check ,gum and also inside the left nose ,which is the supply area of lingual and maxillary branch of the trigeminal nerve.(Figure 2) Rest of the head, neck, trunk and limb were found normal.

Figure 2: Distribution of lesion over tongue

Investigation

A. Blood examination:

Hemoglobin -12 gm% ,TLC -7800 , DLC- neutrophil-72, eosinophil-2, bosophil-0, lymphocyte- 23, monocyt- 3

Blood sugar- 96 gm/dl, blood urea -23 mg/dl

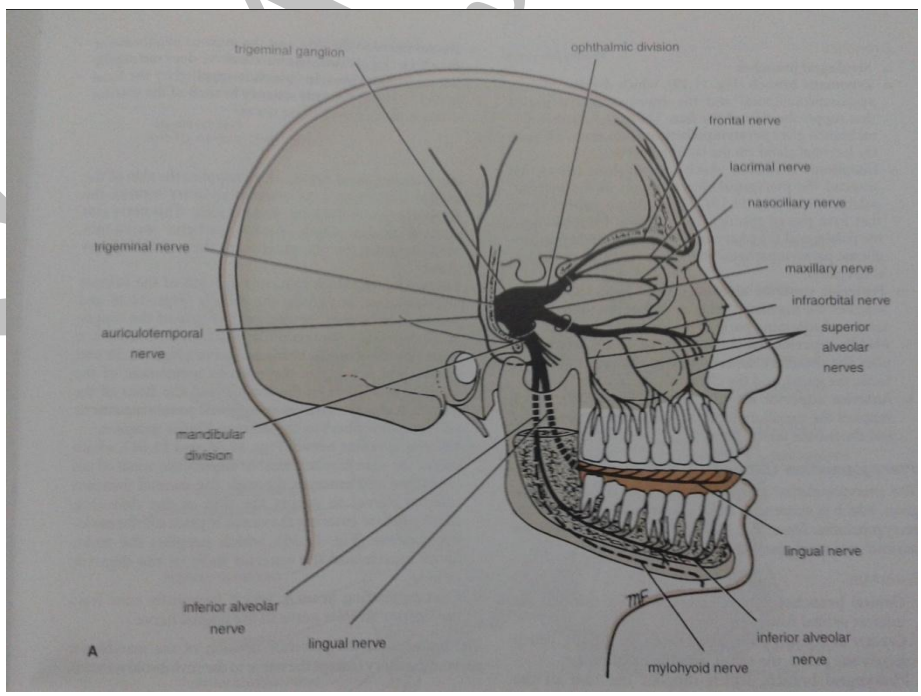
B. USG of abdomen was within normal limit

DISCUSSION

Distribution of a peripheral nerve, either cranial or spinal, is usually determined by anatomical dissection .Herpes zoster infection is a clinical demonstration of distribution of a sensory nerve .

Anatomy of Trigeminal nerve[1]: The Trigeminal is the largest cranial nerve . It leaves the anterior part of the pons as a small motor root and a large sensory root. It goes anteriorly in the posterior and middle cranial fossa. Here the sensory root expands to form the trigeminal ganglion. This ganglion is situated in a fold of dura mater called the trigeminal cave . The motor root is situated just below the sensory root and completely separated from it .(Figure 3)

Figure 3: Anatomy of trigeminal nerve



Branches and supply:

Branches	Subdivisions	Supply areas
Ophthalmic (sensory)	Lacrimal ,Frontal , Nasociliary .	Skin of forehead ,eyelids ,nose ,airsinus and lacrimal glands .
Maxillary (sensory)	Zygomatic,alveolar ,palatine , pharyngeal.	Skin of face and nose , mucosa of upper alveolus , pharynx ,palate ,tonsil and nasal cavity .
Mandibular (motor and sensory)	Anterior-all motor, buccal sensory. Posterior- all sensory Myelohyoid and submandibular gland motor.	Skin and mucous membrane of forehead, external Ear, check , tongue ant 2/3 rd alveolar process, Muscles of mastications, submandibular gland.

Varicella zoster virus[2] : Varicella zoster virus is a Herpes virus which is sub-classified as alphaherpesvirinae. It is a DNA virus with a relatively short replicative cycle (12-18 hours). *It is responsible for chicken pox* .

Herpes zoster: Also known as Shingles, Zona. Herpein mean to creep , zoster mean girdle. It is usually a disease of adult. It occurs in persons who had chicken-pox several years earlier. The virus is believed to remain dormant in the sensory ganglia[3]. The virus may leak out at times but is usually held in check by the residual antibody. Later when the antibody has dropped to in effective levels, the virus may be reactivated. The virus travel along the sensory nerve and produce zoster lesions on the area of skin or mucosa supplied by it. The reactivation is associated with inflammation of the nerve which accounts for the neuritic pain that often precedes the skin lesions[4]. The rash is typically unilateral and confined to the area supplied by a single sensory ganglion.

CONCLUSION

The typical distribution of pain and rash corresponds to the exact sensory supply areas of trigeminal nerve. The Varicella zoster virus takes all the pain to teach us anatomy.

REFERENCES

1.Trigeminal nerve ,in Clinical Anatomy by regions ,9 th edition (2012) ,Richard S. Snell , p-607 -610 .

2. Herpesviruses , Ananthanarayan and Paniker's Text Book Of Microbiology editor Arati Kapil , 9th edition (2013) p-466-473 .

3. Shingles causes – Mayo Clinic : www mayoclinic.org>con-20019574 .

4. Shingles – www.cdc.govt>shingles