

NEUROTROPHIC /NEUROPARALYTIC KERATITIS IN ROCM

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Introduction:

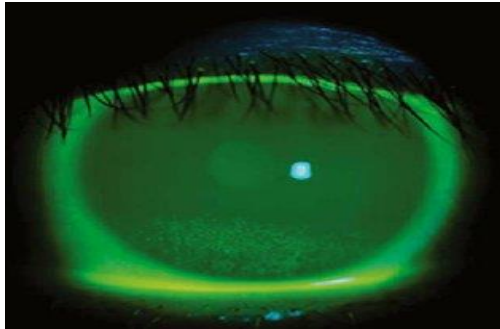
- Formerly known as Neuroparalytic keratitis, is a degenerative corneal disease characterized by decreased or absent corneal sensation, leading to epithelial breakdown , impairment of healing, and ultimately corneal ulceration , melting and perforation.
- Decreased lubrication of ocular surface due to inadequate eyelid closure or decreased blink frequency can lead to exposure keratopathy.

Case report 1:

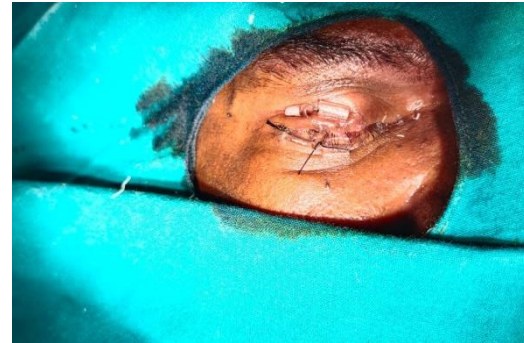
- A 48years old male, denovo diabetic patient came to our department with complaints of defective vision with incomplete closure of upper eyelid in right eye associated with headache,retro orbital pain.
- He had tested positive for covid- 19 by RT-PCR 10 days ago before he developed these symptoms.
- On ocular examination , the patient had lagophthalmos, lusterless cornea with absent corneal sensations,epithelial defect in the inferior cornea which stained positive for fluorescein , with total ophthalmoplegia.
- Patient used lubricant ointment topically. And underwent permanent tarsorrhaphy.



Pre -op



Fluorescein stain
positive: 5 X 3mm



Tarsorrhaphy



Post-op

Case report 2:

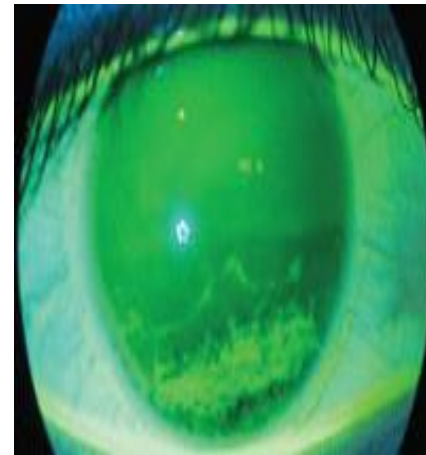
- A 55 years old male, known diabetic patient with complaints of defective vision with incomplete complete closure of upper eyelid in right eye associated with headache, retro orbital pain.
- He had tested positive for covid- 19 by RT-PCR 14 days ago before he developed these symptoms.
- On ocular examination , the patient had proptosis, lagophthalmos, lusterless cornea with absent corneal sensations,epithelial defect in the inferior cornea which stained positive for fluorescein.
- Patient used lubricant ointment topically. And underwent temporary tarsorrhaphy.



Pre-op ; proptosis



Pre-op ;
lagophthalmos



Stain positive size of
6 X 3 mm



Post-op

Discussion :

- Neurotrophic keratitis is a degenerative disease of the corneal epithelium resulting from impaired corneal sensations due to fifth and seventh cranial nerve involvement.
- Neuroparalytic keratitis is inflammation of cornea as a sequel to interruption of sensory impulses over the seventh cranial nerve.
- Mucormycosis is an aggressive opportunistic fungal infection.
- In ROCM, due to invasion of orbital nerves (fifth and seventh cranial nerves) , symptoms may include facial or periorbital swelling or numbness, blurred vision, chemosis, proptosis, diplopia, ophthalmoplegia, corneal anesthesia, and loss of vision
- NK is characterized by corneal epithelial changes ranging from superficial punctate keratopathy to recurrent and/or persistent epithelial defects (PED) and ulcers, which may progress to stromal melting and corneal perforation. Damage to the trigeminal sensory fibers also affects tear film production due to decreased stimulation of the tear gland reflex.

- Patients presented with lagophthalmos due to involvement of seventh cranial nerve due to fungal infiltration causing exposure keratitis.
- Exposure keratopathy (also known as exposure keratitis) is damage to the cornea due to dryness caused by incomplete or inadequate eyelid closure, resulting in loss or insufficiency of the tear film.
- In case 1, patient had lagophthalmos due to facial nerve palsy causing exposure keraopathy.
- In case 2, patient had proptosis and lagophthalmos which leads to exposure keratopathy.
- These Patients treated topically by applying lubricating ointment and close the eyelid by patching or lid closure using tape.
- The lids can also be closed using temporary sutures such as a Frost suture, or partially closed by creating a temporary or permanent tarsorrhaphy.