

## Exposure Keratopathy Practice Management Guideline

Exposure keratopathy is caused by decreased lubrication of the ocular surface due to inadequate eyelid closure or decreased blink frequency. ICU patients are at high risk for this due to impairment of the above protective eye mechanisms which make this population susceptible to corneal dehydration, abrasions, perforation, and infection.

In effort to prevent exposure keratopathy all intubated and sedated patients should have the following orders:

- **Polyvinyl alcohol-providone PF (Refresh Classic) ophthalmic solution**
  - 1 drop in both eyes every 4 hours (06:00, 12:00, 18:00, 24:00)
- **White petrolatum-mineral oil (Lubrifax PM) 83-15% eye ointment**
  - 0.25 in both eyes nightly (22:00)

Special considerations:

- If patients are awake and alert, but intubated and/or ventilated, nightly lubricifresh may be omitted.
- If patient has incomplete eye closure, place bilateral eye shields in addition to the above orders.
- Patients on non-invasive ventilation are at high risk, especially if there is a leak. Consider the above.
- Order Refresh Classic in awake alert patients complaining of dry eyes.

### References

- Ahmadinejad, M., Karbasi, E., Jahani, Y., et al. (2020). Efficacy of simple eye ointment, polyethylene cover, and eyelid taping in prevention of ocular surface disorders in critically ill patients: a randomized clinical trial. *Critical Care Research and Practice*. doi: 10.1155/2020/6267432
- Kousha, O., Kousha, Z., & Paddle, J. (2018). Exposure keratopathy: incidence, risk factors and impact of protocolized care on exposure keratopathy in critically ill adults. *Journal of Critical Care*, 44; 413-418.
- Shan, H., Min., D. (2010). Prevention of exposure keratopathy in intensive care unit. *International Journal of Ophthalmology*; 3(4) 346-348.

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