

A Second Look at the Impact of Normal Saline on the Incidence of Exposure Keratopathy

Dear Editor,

This letter is in response to the article written by Davoodabady *et al.*^[1] Unconscious patients are prone to exposure keratopathy, especially due to loss of cornea reflex and lack of tear production, which are natural protective mechanisms for the eyes.^[2] Such patients cannot nictitate and close their eyelid due to reduction in consciousness level and receiving tranquilizers and anesthetic medicines. As a result, the risk of eye injuries such as dryness, abrasion, tear, and keratitis increases.^[3]

The authors presented their methodology; however, some inadequacies have been identified.

The authors reported to have applied some inclusion and exclusion criteria; however, if the study was initiated on the first day of patients' admission, it would be difficult, if not impossible, to effectively uphold the inclusion and exclusion criteria in the study protocol.

The increase in the occurrence reported by the authors could have been caused by the interaction between normal saline and other treatments applied. It would have been more appropriate to have a third group who will receive only normal saline or upholding the two groups by giving one group normal saline and the other group ointment and artificial tears. Because one eye of all the patients was used as control, the authors should present their results in relation to the untreated eye. This would tell readers whether the new occurrence of keratopathy affected both eyes or just the treated eye.

It was not reported by the authors whether the artificial tear solution used was examined to rule out preservatives which may also irritate the eye. More details about the constituents of the artificial tear solution would be useful, especially when this study is to be replicated. A previous study has reported that artificial tear solution containing hydroxypropyl guar was more effective than normal saline where normal saline did not produce any significant changes.^[4]

The randomization of participants into study groups was defective because there was no assurance of homogeneity among study participants. Because some (14%) of the participants already had keratopathy even before the study, it is not clear how the authors performed randomization ensuring homogeneity between the control and intervention groups.

Financial support and sponsorship

Nil.

Conflicts of interest

Nothing to declare.

Chinomso U. Nwozichi¹

¹Department of Adult Health Nursing, Babcock, University School of Nursing, Ilishan-Remo, Ogun State, Nigeria

Address for correspondence:

Mr. Chinomso U. Nwozichi,
Department of Adult Health Nursing, Babcock University School of Nursing, Ilishan-Remo, Ogun State, Nigeria.
E-mail: nwozichichinomso@gmail.com

References

1. Davoodabady Z, Rezaei K, Rezaei R. The impact of normal saline on the incidence of exposure keratopathy in patients hospitalized in intensive care unit. *Iran JNurs Midwifery Res*2018;23:57-60.
2. Kalhori RP, Ehsani S, Daneshgar F, Ashtaria H, Rezaei M. Different nursing care methods for prevention of keratopathy among intensive care unit patients. *Glob J Health Sci*2016;8:212-7.
3. Werli-Alvarenga A, Ercole FF, Botoni FA, Oliveira JA, Chianca TC. Corneal injuries: Incidence and risk factors in the Intensive Care Unit. *Rev Lat Am Enfermagem*2011;19:1088-95.
4. Uchiyama ED, DiPasquale MA, Butovich IA, McCulley JP. Impact on ocular surface evaporation of an artificial tear solution containing Hydroxypropyl Guar. *Eye Contact Lens* 2008;34:331-4.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:



Website:
www.ijnmrjournal.net

DOI:
10.4103/ijnmr.IJNMR_8_18

How to cite this article: Nwozichi CU. A second look at the impact of normal saline on the incidence of exposure keratopathy. *Iranian J Nursing Midwifery Res* 2018;23:491.

Received: January, 2018. **Accepted:** April, 2018.

© 2018 Iranian Journal of Nursing and Midwifery Research | Published by Wolters Kluwer - Medknow