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Implementing an evidence-based practice of eye care in United Christian Hospital (UCH) Intensive Care Unit (ICU)

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Introduction

A paralyzed or semi-comatose ventilated patient has multiple risk factors to develop exposure keratopathy. Two randomized controlled studies in Australia and Hong Kong have proved the effectiveness of polyethylene covers in prophylactic preventing exposure keratopathy in ventilated critically ill patient. Consequently, the evidence-based practice of eye care intervention has been used to minimize the risk of exposure keratopathy.

Objectives

Implement evidence-based eye care for ventilated patient to minimize the risk of exposure keratopathy in UCH ICU.

Methodology

Evidence-based eye care intervention conducted between June and November 2016 as Phase 1 in UCH ICU, targeting on ventilated patient who put on neuro muscular blocking agent (NMBA), patient with incomplete eyelid closure, and semi-comatose patient with incomplete eyelids closure that was referred by case nurse. A prospective survey was conducted to assess and evaluate 3 months (Phase 1) clinical outcomes after implementation.

5 identical briefing sessions were conducted before Phase 1 implementation. The aims of the briefing sessions were to enhance nurses' knowledge and increase nurses' awareness on evidence-based eye care in ICU. The briefing sessions upon the implementation mainly addressed how to provide appropriate care using a silicone adhesive tape (5cm width) for the prophylactic preventive measure as a cover for patient's eye. Patient's both eyelids were taped by silicone adhesive tape (6cm length x 5cm width) which assists in maintaining complete eyelids closure. The silicone adhesive tape cover provides a barrier against tear film evaporation and prevents corneal desiccation. All patients were assessed with no sign of exposure keratopathy at the beginning, and then evidence-based eye care intervention was implemented by case nurse every 8 hours. The interventions included eye swabbing with normal saline, eye assessment for any signs and symptoms of exposure

keratopathy, and change silicone adhesive tape or whenever necessary. If patient had signs and symptoms of exposure keratopathy, ICU doctor assessed patient's eye condition for further management.

Result

Of 15 recruited patients, 11 patients were on NMBA, and 4 patients were semi-comatose with incomplete eyelid closure. The average hour of evidence-based eye care intervention was 38 hours. The main reason to cease evidence-based eye care intervention was due to discontinued of NMBA, and 3 patients were passed away due to their medical illness.

Phase 2 plan to start at 1Q2017, targeting on semi-comatose patient who put on sedation with incomplete eyelid closure, and patients included in Phase 1.