



Service Priorities and Programmes
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Evidence-based practice of eye care in ventilated patient in Intensive Care Unit (ICU) of United Christian Hospital (UCH)

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Introduction

Eye care is an essential part of nursing care in intensive care unit. Sedations and neuromuscular blocking agent (NMBA) are commonly use in critically ill ventilated patients. These medications reduced eye blinking rate, impaired blink reflex and induced the inadequate closure of eye lids, which highly increased risk of exposure keratopathy and microbial keratitis in pathogens rich ICU environment. Thus, effective and standardized eye care is necessary to minimize the risk of exposure keratopathy and enhanced the quality of critical nursing care.

Objectives

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

Methodology

Literatures and current practice of eye care were reviewed. Evidenced-based eye care program with guideline and flow chart were developed and approved in ICU management meeting. Eye taping material was changed from hypoallergenic adhesive-tape to silicon adhesive-tape after revised. Breathable and hypoallergenic silicon adhesive-tape provided constant mild adhesive power to fragile skin. Reduced the shearing force while tape was removed for assessment and observation. 6cm length x 5cm width of silicon tape was suggested to use for complete cover and closure of patient's eyes, which against dehydration, tear evaporation and resist microbes invasion. Five identical briefing sessions were conducted. Evidenced-based eye care program and silicon adhesive-tape application were introduced. Patients with prone position, risk of or existing impaired eyelid closure were included. Patients with existing corneal infection or conjunctivitis were excluded.

Result

Prospective survey was conduct from June 2016 to December 2017. 54 patients, 15 females and 39 males, age range from 20-80 years old. 67% of these patients were in used of NMBA, 15% were semi-comatose with incomplete eyelid closure and

impaired blinking reflex, 11% had impaired eye lids closure and 5% were in prone position. The average hours of evidence based eye care intervention was 42.5 hours. 56% of patients completed the program as NMBA was ceased after physician assessment. 22% of them were deceased, 13% had improved consciousness and increased eye blinking, 7% were transferred to other Hospitals for ECMO and 2% had very fragile skin. Results, among all 54 patients, none of them developed corneal abrasion and infection. 93% of patients did not experience exposure Keratopathy. Remains 7% of patients developed chemosis were referred to Intensivists for assessment. Eye drops was prescribed to keep eye moisturization. Patient's head of bed was elevated; regular close monitoring carried out to prevent further deterioration.