



Service Priorities and Programmes
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Submitting author: Dr C K CHAN

Post title: Resident, HKEH, KCC

Post-cataract Operation Endophthalmitis Prevention Enhancement Program in Hong Kong Eye Hospital

CHAN JCK(1), CHAN NH(1), LEE SY(2), YIM LFP(1), FONG HYR(1), LAM NM(1), LEE A(1)

(1)Hong Kong Eye Hospital, (2)Queen Elizabeth Hospital

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Introduction

Post-operative endophthalmitis is a sight-threatening complication of ophthalmic surgeries. The baseline rate in recent five years for cataract without intracameral cefuroxime in our Hospital was 0.060%, with reference to baseline rate in ESCRS with IC cefuroxime ranging from 0.014% to 0.08%. From December 2016 to March 2017, an apparent increase to 0.226% was noted.

Objectives

To evaluate the effectiveness of post-cataract operation endophthalmitis prevention enhancement program.

Methodology

This program was started in April 2017. Pre-, intra-, and post-operative care was reviewed. Seven possible risk factors were identified: hand hygiene and aseptic technique of eye medication administration, skin antisepsis, surgical antibiotic prophylaxis (SAP), peri-op patient care, sterilization of equipment, environmental care, and patient education. Audits focused on these risk factors were performed. Post-operative endophthalmitis rate was monitored as an outcome measure.

Result

The rate of post-cataract endophthalmitis from May to December 2017 decreased to 0.025%. The compliance rates of care related to the possible risk factors were studied. Hand Hygiene and aseptic technique of eye medication administration: 100% and 99% compliance in 1Q and 3Q 2017 respectively. The 5 moments of hand hygiene in 2017 improved from 94% in 3Q 2016 to 99% in 3Q 2017. The compliance of surgical hand antisepsis, gowning and gloving in operative procedures was 100%. Skin antisepsis: the maintenance of sterile field and good skin preparation was 100%. Povidone-iodine into the conjunctival sac and peri-orbital area showed 91% compliance. SAP: guidelines were in-place with no change. Peri-op patient care: patient's body temperature was maintained by providing warm blankets. Wound dressing was ensured for every patient after operation with 100% compliance.

Sterilization of equipment: compliance of use of surgical instrument, sterilization process, reprocessing of single use of device, handling of implants was 100%. Environmental care: monitoring, maintenance, change of HEPA filter for the conventional ventilation systems of the operating room were ensured. Besides the regular staff training, audits of environmental cleansing, mop heads disinfection, linen management and clinical waste management were 100% compliance. Use of linen for patient in OT was reinforced in Sep 2017. Patient education: evaluation of patient's understanding of the post-operative education was 100% satisfactory result. The importance of hand hygiene, patient education on pre-operative and post-operative care should be emphasized. Furthermore, good communication and cooperation between frontline staff and infection control team are indispensable for successful infection prevention programs.