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Approved CPD 6 points (Royal College of Ophthalmologists)

Abstracts

16 - Microbial keratitis after cyclophotocoagulation in childhood glaucoma

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Introduction: Cyclophotocoagulation (CPC) is indicated in childhood glaucoma (CG) which is refractory to other forms of treatment, or eyes with poor visual potential. The aim of this study is to report the clinical features and outcome of children who developed microbial keratitis (MK) following CPC.

Methods: We present a retrospective review of 32 children with a diagnosis of CG, who underwent CPC and presented with MK, from June 2014 to October 2020. Baseline details included age, glaucoma diagnosis and prior ocular surgery and the time interval between CPC and MK. Operative details included the extent and number of applications of CPC use. We noted the MK clinical characteristics, bacteria isolated, treatment received, and eventual outcome.

Results: Out of the 2,252 children with CG treated during the study period, 32 (10.26%) developed MK. The mean interval between the first CPC and MK onset was 5.36±SD years.

The CPC parameters were: mean (±SD) power 1524.13±481 SD mW, duration 1623.33±283.67 SD mS, 24±7.59 SD spots, 256±82.53 SD degrees treated.

Twenty-four (73%) of the patients presented with complications at MK onset (corneal thinning, corneal perforation, endophthalmitis, failed graft). *Streptococcus pneumoniae* was commonly isolated. The majority of the patients cured with a significant corneal scar.

Conclusions: Around 10% of children undergoing CPC may develop MK. Our findings reveal that complications related to CPC are serious, and the decision to use it should be considered. Corneal sensitivity is reduced in children with CG. Corneal neurotrophic changes after CPC could be a predisposing factor to developing MK.

Corneal sensitivity measurement in patients with CG could help identify these high-risk patients. CPC parameters in children should be standardised. Further investigations are needed.