Anterior Segment

BILATERAL ACANTHAMOEBA KERATITIS RELATED TO OVERNIGHT ORTHOKERATOLOGY

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PURPOSE: Report bilateral Acanthamoeba keratitis (AK) in an overnight orthokeratology (OOK) wearer.

METHODS: Case report

RESULTS: A 19-year-old male, OOK contact lens (CL) wearer, presented with a 1-week history of pain in both eyes (OU). Best corrected visual acuity (BCVA) was 20/25 in right eye and 20/20 in left eye. Slit-lamp examination revealed an asymmetric central punctate keratophaty. Despite moxifloxacin and antiviral topical treatment, his BCVA worsened and developed pseudodendritic epithelial infiltrates with stromal haze. Bilateral AK was diagnosed by corneal culture and confocal microscopy showing amoebic cysts. He was treated with oral metronidazole for 1 week and topical therapy with polyhexamethylene-biguanide 0.02%, propamidine-isethionate 0.01%, polymyxin B sulfate-neomycin sulfate-gramicidin, and fluormetholone which were gradually reduced. After 6 months, corneal infiltrates had healed and BCVA was 20/20 OU.

CONCLUSIONS: AK is a rare but severe ocular infection, strongly associated with CL. There is a higher incidence in patients using OOK CL for myopia control and the main risk factors are: overnight use, inadequate hygiene and corneal surface damage because of the tight bending between CL and cornea. AK can simultaneously affect OU during OOK. It is essential to consider AK on the differential diagnosis of CL-associated keratitis. Early diagnosis and accurate therapy are key to a good visual prognosis. We must become aware of complications and we should weigh carefully the benefits of temporary myopia reduction against the risk of infection, especially when there are less risky alternatives with good scientific evidence.