

Risk factors for contact lens related microbial keratitis

ABSTRACT

Background: Contact lens related microbial keratitis (CLRMK) is a complication of contact lens wear and is sight threatening. A hospital case control study was conducted to determine the risk factors for CLRMK in patients with CLRMK in government hospitals in the Klang Valley. **Materials and Methods:** All patients who presented with CLRMK (n=94) at the hospitals were selected as cases and controls (n=94) were taken from contact lens users without CLRMK. Self administered questionnaire in Bahasa Malaysia was used to collect data on socio-demographics, contact lens characteristics, personal habit and contact lens care procedures. Data was analysed using SPSS 16. **Results:** The most common causative agent was *Pseudomonas aeruginosa*. Chinese ethnicity (aOR 0.126, CI 0.045, 0.355 p=0.001) and Indian ethnicity (aOR 0.295, CI 0.088, 0.989 p=0.048) had decreased risks for CLRMK while Malay ethnicity was a predictor for CLRMK with an increased risk of 70%-87%. Non-compliance to lens care procedures contributed to an increased risk of 2.6 times for CLRMK (aOR 2.590, CI 1.003, 6.689 p=0.049). Not washing hands with soap (aOR 2.98, CI 1.02, 8.70 p=0.046), not performing rubbing technique (aOR 3, CI 1.19, 7.54 p=0.019) and not cleaning lens case with multipurpose solution (aOR 3.24, CI 1.46, 7.19 p=0.004) were identified as predictors for CLRMK. **Conclusion:** The risk of CLRMK is increased in Malays and in non-compliant wearers.

Keyword: Contact lens; Microbial keratitis; Lens care procedures; Risk factors