

Risk Factors for Cataract: A Case Study at National University of Malaysia Hospital

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ABSTRAK

Tujuan kajian ini adalah untuk mengenal pasti jenis katarak kaitan-umur yang paling umum dan mengkaji faktor risiko bagi katarak jenis kaitan-umur di dalam sampel pesakit katarak di Hospital Universiti Kebangsaan Malaysia. Seramai 35 pesakit (17 orang lelaki dan 18 orang perempuan) dengan katarak dari wad dan klinik oftalmologi di hospital tersebut telah direkrut. Julat umur pesakit adalah antara 39 hingga 93 tahun (min 64.9 ± 11.5 tahun). Sistem 'The Lens Opacities Classification System (LOCS) III' telah digunakan untuk menggredkan opasiti nuklear, kortikal, dan subkapsular posterior. Pengredan katarak telah dijalankan dan maklumat berikut telah dikumpulkan: akuiti visual permulaan dan akuiti visual dengan pembetulan terbaik, keterangan demografi, sejarah kesihatan, pengambilan diet antioksidan serta pendedahan mata kepada ultraunggu B sepanjang hayat. Analisis telah dilakukan menggunakan 'standard case-control design'. Ujian-t telah digunakan untuk menilai kesignifikanan pemboleh ubah berterusan dan ujian 'chi-squared' digunakan untuk pembolehubah kategorikal. Prevalens keseluruhan katarak jenis kortikal adalah 34.4% (12 pesakit), katarak nuklear 60.0% (21 pesakit) dan katarak subkapsular posterior 57.1% (20 pesakit). Tiada sebarang faktor risiko dijumpai bagi katarak jenis nuklear. Bagi katarak subkapsular posterior, hipertensi sahaja merupakan faktor risiko berpotensi ($\chi^2 = 4.38$, $p = 0.036$), dan bagi katarak kortikal, hanya menghisap rokok didapati sebagai faktor risiko yang signifikan. Pendedahan efektif okular UV-B didapati bukan satu faktor risiko berpotensi yang signifikan. Namun dapat dilihat perbezaan min pendedahan efektif okular UV-B antara pesakit dengan katarak kortikal dengan mereka yang tiada katarak kortikal adalah lebih besar berbanding katarak jenis nuklear dan subkapsular posterior. Hipertensi pula didapati sebagai faktor risiko berpotensi bagi katarak jenis subkapsular posterior manakala menghisap rokok merupakan faktor risiko berpotensi bagi katarak jenis kortikal. Walaupun tidak signifikan secara statistik, pendedahan efektif okular UV-B mungkin merupakan satu faktor risiko berpotensi bagi kejadian katarak jenis kortikal.

Kata kunci: Faktor risiko, katarak jenis kaitan-umur, pendedahan UV-B, penyakit sistemik, menghisap rokok.

ABSTRACT

The purpose of this study was to identify the most common forms of age-related cataracts and to estimate possible risk factors for age-related cataracts in a sample of cataract patients at the National University of Malaysia Hospital. Thirty five patients (17 males and 18 female) with cataracts were recruited from the ophthalmology ward and clinic at the hospital. The age range of the patients was between 39 to 93 years (mean 64.9 ± 11.5 years). The Lens Opacities Classification System (LOCS) III was used to grade nuclear, cortical and posterior subcapsular lens opacities. Grading of the cataract was carried out and the following information was collected: initial visual acuity and best-corrected visual acuity, demographic details, health history, dietary intake of antioxidants and lifetime ocular ultraviolet B exposure. Analyses were conducted using a standard case-control design. T-tests were used to assess the significance of continuous variables and chi-squared tests were used for categorical variables. The overall prevalence of cortical cataract was 34.4% (12 patients), nuclear cataract was 60.0% (21 patients), and posterior subcapsular cataract was 57.1% (20 patients). No significant potential risk factor was found for nuclear cataracts. In the case of posterior subcapsular cataract, hypertension was the only potential significant risk factor ($\chi^2 = 4.38$, $p = 0.036$), and in the case of cortical cataract, cigarette smoking was the only significant risk factor. Although lifetime effective ocular UV-B exposure was found to be not a significant potential risk factor, but it was seen that for cortical cataracts, the mean difference of lifetime effective ocular UV-B exposure between those with cortical and those without cortical cataracts was larger compared to others with nuclear and posterior subcapsular cataracts. Hypertension was found to be a potential significant risk factor for posterior

subcapsular cataract whereas cigarette smoking was a potentially significant risk factor for cortical cataract. Although not statistically significant, lifetime effective ocular UV-B exposure maybe a potential risk factor for cortical cataract.

Key words: Risk factors, age-related cataract, UV-B exposure, systemic disease, cigarette smoking.