

ABSTRACT

Introduction

Childhood glaucoma is the one of the main reasons for blindness in childhood. Early diagnosis and treatment of glaucoma may helpful in preventing blindness.

Objective

The purpose of this study was to identify the risk factors associated with glaucoma in 0-14 year old children in Sri Lanka and assess the awareness of the diseases among parents of children with glaucoma.

Methodology

It was a hospital-based case control study. For this study 101 cases (patients with glaucoma) and 300 controls were selected. All the children with glaucoma diagnosed by the consultant paediatric eye surgeon attending four paediatric eye clinics in four main hospitals were included in the study. Controls were the children with eye disease devoid of glaucoma and were randomly selected from the same clinic. Information on risk factors were obtained by administering an interviewer administered questionnaire. Multiple logistic regression analysis was done to remove confounding. Results were expressed as odds ratio with their level of significance to quantify the strength of association between risk factors and glaucoma.

Results

Being a Sinhalese (OR=2.219, CI=1.119-4.398, P=0.0224), being a Buddhist (OR=2.537, CI=1.285-5.009, P=0.0073), family income less than Rs.50000 (OR=2.866, CI=1.743-4.711, P=<0.0001) were significant risk factors for glaucoma in this study. Female gender (OR=1.478, CI=0.938-2.329, P=0.0925), age between 7.1-14 years (OR=1.2457, C I =0.79-1.962, P=0.0349), had maternal diseases prior to pregnancy (OR=2.348, CI=0.959-5.749, P=0.0618), delivery of child in preterm or post term (OR=1.915, CI=0.872-4.205, P=0.1056), antenatal complications during previous pregnancies (OR=0.392, CI=0.117-1.313, P=0.1288), weight for height of the child being not normal (OR=1.331, CI=0.845-2.097, P=0.2178), history of eye trauma (OR=1.736, CI=0.742-4.062, P=0.2031), parental consanguinity (OR=4.082, CI=0.898-

8.562, P=0.0687) and paternal farsightedness (OR=0.166, CI=0.213-1.278, P=0.0834) were found as risk factors for glaucoma, but not significant. A descriptive analysis was carried out to assess the awareness of the diseases among parents of children with glaucoma. Majority of parents had knowledge on the disease, management and complications of the disease. Only one person had awareness on three main clinical symptoms of the disease.

Conclusion and Recommendation

The study revealed that being a Sinhalese (ethnicity), being a Buddhist (religion) and family income less than Rs.50000 are significant risk factors of having glaucoma. Gender, age, maternal pre pregnancy diseases, time of delivery, antenatal complications during previous pregnancies, weight for height, history of eye trauma, parental consanguinity and parental eye diseases may risk factors for getting glaucoma, but not significant.

These findings are helpful in detecting the risk group of glaucoma which may supports early diagnosis, interventions, and management. Health education is essential to enhance the knowledge among parents. Future studies should focus more on identifying cultural risk factors and risk factors in relation to social status for glaucoma. Community prevalent study should be done to assess disease burden in the country.

Key words: Glaucoma, childhood, health education, blindness