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Sir,
Antenatal Maternal Factors and Optic Nerve Hypoplasia

Optic nerve hypoplasia (ONH) is a non-progressive congenital abnormality which can affect one or both optic nerve(s). It is now recognised that ONH is not an uncommon condition.^{1,2} ONH may occur as an isolated condition or co-exist with a wide spectrum of neuroendocrine and ocular abnormalities.^{3,4,5} In spite of numerous studies, the maternal

factors which predispose to the development of ONH are unknown. The condition has been associated with maternal diabetes mellitus,⁶ post-mature birth⁷, young maternal age,⁸ first born children⁹ and maternal ingestion of drugs during pregnancy, especially alcohol.¹⁰

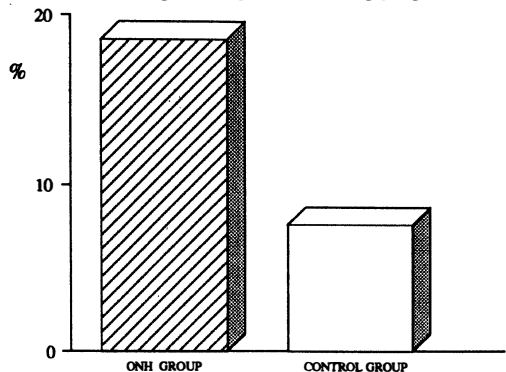
We have carried out a questionnaire survey study involving the mothers of 27 patients with bilateral ONH. Patients were identified from the records of the Royal Hospital for Sick Children in Glasgow which is a referral centre for a population of 2.5 million. The aim of the study was to gather information regarding the maternal history during pregnancy. The study also included 65 mothers of age matched normal children. The main factors reviewed included the timing of birth, maternal age at birth, alcohol intake and smoking during pregnancy.

The results obtained regarding the timing of birth demonstrated a slightly higher prevalence of both premature and post-mature birth in the patient group, the latter result agreeing with a previous report of slightly raised prevalence of post-maturity in children with ONH.⁹ Our results were also, as in that report, not statistically significant.

Our results which demonstrated lower maternal age in mothers of patients with ONH (25.5 years compared to 27.4 years in the normal group) were in accordance with previous reports.^{8,9} However, this difference was not statistically significant ($0.2 < P < 0.5$).

We found that a greater number of mothers of patients smoked more than 10 cigarettes per day during pregnancy (37% compared to 20% in the normal group). Similarly a slightly

Combination of drinking alcohol and smoking more than 10 cigarettes per day during pregnancy.



higher proportion of mothers of patients (37%) drank alcohol during pregnancy when compared to the control group (25.8%).

The completed questionnaire forms were further analysed with regard to heavy smoking (more than 10 cigarettes per day) combined with drinking alcohol during pregnancy in both groups, ie mothers of patients and mothers of normal children. The prevalence was found to be 18.5% in the patient group and 7.6% in the control group (Fig. 1). This trend, however, did not reach statistical significance (Chi-squared $0.1 < P < 0.2$).

The combination of smoking and alcohol consumption during pregnancy has not hitherto been studied in patients with ONH. In view of the trend shown in our study, further investigation involving a larger number of patients is recommended.

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