

Original Paper

Incidence of neural tube defects and its risk factors in Yasuj, Iran (2000-10)

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Abstract

Background and Objective: The incidence of neural tube defects (NTDs) is varied according to race, geographical situation and other predisposing factors. This study was carried out to determine the incidence rate of NTDs and its risk factors in Yasuj, Iran.

Materials and Methods: This case - control study was done on live newborns in Imam Sajad hospital, Yasuj, Iran during 2000-10. 78 neonates with NTDs out of 36755 live newborns were considered as cases. The control group was also consisting of the same number of healthy neonates who born at the same period and in the same hospital. Data were collected by a check-list and analyzed using SPSS-19, Chi-Square, Logistic regression and odd's ratio.

Results: The incidence rate of NTDs was 2.12 per 1000 live births. Anencephaly and Spina Bifida was detected in 59 (75.6%) and 19 (24.3%) of affected newborns, respectively. The ratio of females to males was 1.5 times. 53.85% of mothers with affected newborns were grouped in 27-36 years age range. The mean number of pregnancies and abortion between two groups of mothers had no statistical significant differences. There is no significant relation between the mothers occupation and the incidence of NTDs. 10 (12.8%) of mothers from case group and 7 (8.97%) of mothers from control group have used tobacco. 52 (66.7%) of mothers of case group and 30 (38.5%) of controls did not consumed folic acid. The relation between non-user folic acid during pregnancy with NTDs was significant (95% CI: 1.4-6.15, OR=2.93, P<0.001).

Conclusion: This study showed relatively high incidence of NTDs in Yasuj. Non-consuming folic acid increased the risk of NTD by 2.93 times.

Keywords: Neural tube defect, Folic acid, Abortion, Incidence

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Received 20 July 2011

Revised 4 March 2013

Accepted 6 March 2013