Neural Tube Defects and Vitamin Prophylaxis

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In the early 1980s, two studies (1,2) suggested that a reduction in the prevalence at birth of neural tube defects could be achieved in mothers given periconceptional multivitamin and/or folic acid supplementation. This claim led to considerable interest in Ireland, where there is a high prevalence of neural tube defects. It was considered that the case for supplementation had not been made conclusively in these original studies and that further trials were necessary. A study group was set up in Ireland to coordinate work on this problem.

In the Dublin Maternity Hospitals a retrospective study was carried out between 1970 and 1975 to determine the risk of recurrence of neural tube defects. The recurrence rate for the mothers, based on follow-up to the end of 1981, was 5.5% (3).

A randomized double-blind trial was initiated in 1982 to determine whether periconceptional supplementation with either folic acid alone or a multivitamin preparation alone can reduce the recurrence risk of neural tube defects in mothers with previously affected offspring from 5% to 1% or less. The patients entered in the trial are randomly allocated to one of three treatment groups: (a) folic acid only; (b) multivitamin only; and (c) folic acid and multivitamin. Supplementation is for a minimum of 3 months before conception and for the first 3 months postconception. Compliance is also being monitored.

REFERENCES