Central nervous system anomalies diagnosed antenatally and post-delivery management

To the Editor

I would like to comment on the interesting study by Mansouri,[1] on the central nervous system (CNS) anomalies diagnosed antenatally and post-delivery management. First, Mansouri,[1] stated that 90 cases were diagnosed antenatally by ultrasonography to have CNS anomalies, and 83 (92.2%) were confirmed postnatally. This cast some suspicions on the optimum precision of ultrasonography in antenatally diagnosing CNS anomalies. It is obvious that ultrasonography as the primary prenatal screening modality is used to detect fetal anomalies, including those of CNS. However, difficulties in evaluating ultrasonographic images (owing to maternal obesity, oligohydramnion) render magnetic resonance imaging (MRI) an important technique in making the final diagnosis. The MRI is considered a valuable second line imaging tool for confirmation, completion, and correction of complex fetal ultrasonographic findings, including various pathologies of CNS. The MRI imaging's role includes not only confirming, or excluding possible lesions, but also defining their full extent, aiding in their characterization, demonstrating other associated abnormalities, and facilitating treatment decision making. However, the drawbacks of MRI include reduced accessibility, poor cost-effectiveness, and shortage of skilled experts in this technique.[2,3]

Second, Mansouri[1] stated that the incidence of neural tube defects (NTDs) during the study period of 1997-2005 was 1.4/1000 births. This looks somewhat higher than 0.76/1000 live births (2001-2005) previously reported.[4] I presume that the actual incidence is higher. This partly might be due as outlined by Mansouri,[1] to the lack of fetal registry of congenital anomalies, except for sporadic institutions, or tertiary care facilities. In a recent survey of a representative sample of Saudi families defined by a multistage random sampling procedure representing both urban and rural settlements, the prevalence of consanguinity was 56% with the first cousin-type being the most common (33.6%).[5] The consanguinity of the parents as an important risk factor must be considered, which could significantly make the incidence of NTDs in Saudi Arabia rated higher. The consanguinity of the parents was found in 89% of the Saudi NTDs parents, and only 67% of the controls.[6]

Third, an emerging body of evidence suggests that apart from NTDs, folic acid supplementation might have salutary effects on the incidence of orofacial cleft birth defects, and have secondary benefits in reducing serum homocysteine concentrations and stroke mortality. However, it might also raise concerns regarding a possible negative effect on the incidence of colorectal cancer.[7] Until more population-based studies addressing the efficacy, safety, and potential deleterious effects of folic acid fortification, and supplementation on cancer risk and other health outcomes are available, the current evidence indicate that both folic acid supplementation and fortification are effective in preventing NTDs,[8] and reducing neonatal mortality from NTDs.[9] That beneficial effect of both folic acid supplementation and fortification has been recently approved in Saudi Arabia, where NTDs incidence declined in the last decade from 1.9/1000 live births (1997-2000) to 0.76/1000 live births (2001-2005) after the initiation of flour fortification with folic acid.[4]

Fourth, as outlined by Mansouri,[1] institution of educational programs on increasing awareness of women, particularly those within child bearing age on the importance of periconceptional folic acid supplementation in the prevention of NTDs is crucial. This would be most effective if it is incorporated within the context of a national campaign aimed in providing various educational, statistical, preventive, diagnostic, and therapeutic measures. This requires collaborative efforts tailored by related personnel to successfully combat NTDs.[10]

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Reply from the Author

No reply was received from the Author.

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