Reviewer's report

Title: The Prenatal Ultrasonographic Detection of Myelomeningocele in Patients Referring to Children's Hospital Medical Center

Version: 1 Date: 12 March 2006

Reviewer: Mario Merialdi

Reviewer's report:

Major compulsory revisions

1) Through the text “referring” should be replaced with “referred”
2) The authors should give, as much as it is possible to obtain from the data in their possession, a more detailed description of the population studied:
   a. Where the all cases coming from the same population?
   b. Where there differences in the populations the cases were coming from that could be related to differences in the detection rates? E.g. were the ultrasonographical examinations done in the same settings? Could the sonographical standards have changed in the interval between the first and last reported cases were detected? Were the patients referred to ultrasonography for some specific reasons as the authors suggest could be the case on page 6?
   c. The 140 cases included all the cases referred in the year examined?
   d. Patients who had multiple sonographical examinations had better chances of being detected? It seems most patients were diagnosed in the third trimester, could this be due to the fact that previous sonograms showed suspicious images?
   e. Are there reports that could suggest potential risk factors in the Iranian population that may explain the high rate?

3) The conclusions of the authors are reasonable but might not be totally justified by the sample examined if they do not provide more evidence to support the generalizability of their findings to the whole Iranian population.
4) The conclusions should focus more on the results of the study that showed an alarmingly low prenatal detection rate. This observation may warrant advocating for better and broader screening programmes, as well as efforts to assure quality of the ultrasonographical examination.
5) Recommendations on changing the abortion laws are probably not justified on the basis of a single study with limited information that could help in understanding how generalizable the results are. Also it would be probably easier, more ethically acceptable and cost effective to improve the screening quality.
6) Those recommendations could be better presented as suggestions and should include also suggestions for primary prevention (folic acid supplementation) if nutritional deficiency are among the identified risk factors for the Iranian population.

Minor essential revisions

Abstract

Indicate location of the Children Hospital

The sentence: the data was collected reading the prenatal ultrasound reports…. Is not clear and could be changed as: ultrasound reports were examined.
The words: “results were interpreted accordingly” could be deleted
Specify were the reference study were conducted

Introduction

MMC should be spelled out at first use
Provide more information, if possible on the potential causes of the high incidence reported in Iran.

Methods

Provide, if possible, more information on the characteristics of the hospital and of the attended population and how they compare to the general population.

Provide, if possible, more details on the ultrasonographical scans (who performed, why they were performed, type of machinery used, range and type of services)

Discussion

The authors could eliminate part of the technical details on the prenatal diagnosis images and possibly include more information from other studies investigating potential causal factors in the population. This information, if available, would be very important to identify the best and more cost effective preventive strategies.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.