

Reviewer's report

Title: Encephalomeningocele cases reviewed over 10 years in the biggest center for corrective surgery in Thailand

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Reviewer: Dr Zhu Li

Level of interest: A paper of limited interest

Advice on publication: Unable to decide on acceptance or rejection until the authors have responded to the compulsory revisions

Comments - Compulsory revisions

This paper reported 21 cases of encephalomeningocele and meningocele admitted to a hospital in Bangkok for surgical corrections from 1990 to 1999. In the paper, authors collected and analyzed data from hospital medical records. As results, authors developed some hypothesis on etiology of encephalomeningocele and meningocele based on male/female ratio, prenatal exposure to chemicals, drugs and infections, geographic distribution, parents' occupation, and lesion region of cases.

It seems to me that the cases reported in this paper occurred during almost last 40 years (aged from 2 months to 39 years old) and had a severe selection bias. Three factors would associate with the bias:

1. Survival rate. Severe cases died shortly after birth while mild cases survived.
2. Admission rate to hospital for surgery. Do all patients in the areas of patients admitted to hospital admitted to the hospital for surgery? If not, what is the proportion of admission?
3. Hospital selection. I don't know how many hospital in Bangkok and Thailand can operate the corrective surgery for encephalomeningocele and meningocele. Is king Chulalongkorn Memorial Hospital an only hospital to perform this surgery? If it is not, what is the proportion of cases admitted to this hospital for surgery and what is the characteristic of patients admitted to this hospital for surgery? If authors wanted to analyze the cases and draw some conclusion on the distribution and develop etiology hypothesis, I would suggest them:

1. Review the medical records of birth rather than surgery in their hospital and other hospital from 1990 through 1999, and collect data on cases of encephalomeningocele and meningocele. This method also has some bias affected by the proportion of birth attendant in the hospital.

2. Use case control study rather than cases alone. Case control study can provide "risk ratio (RR)", which is an useful indicator for causal association while cases review can only provide "proportion" which can't be used for causal association analysis.

If authors are not able to collect data from hospital medical record on birth, and can only use the data available from medical record of surgery, then they can simply report the cases characteristics and can not analyze any distribution and etiology association. This sort of report will provide less important information.

Competing interests:

None declared.