

Oral presentation

Open Access

To study the epidemiology of spina bifida at our centre in India Sangram Singh* and Vigya Chourishi

Address: Pediatric Surgery Department, Shri Aurobindo Institute of Medical Sciences, Indore, [M.P.], 452016, India

Email: Sangram Singh* - drsangramsingh@gmail.com

* Corresponding author

from 53rd Annual Meeting of the Society for Research into Hydrocephalus and Spina Bifida
Belfast, UK. 24-27 June 2009

Published: 27 November 2009

Cerebrospinal Fluid Research 2009, **6**(Suppl 2):S3 doi:10.1186/1743-8454-6-S2-S3

This abstract is available from: <http://www.cerebrospinalfluidresearch.com/content/6/S2/S3>

© 2009 Singh and Chourishi; licensee BioMed Central Ltd.

Background

The human nervous system develops from a small, specialized plate of cells along the back of an embryo. Early in development, the edges of this plate begin to curl towards each other, creating the neural tube - a narrow sheath that closes to form the brain and spinal cord of the embryo. As development progresses, the top of the tube becomes the brain and remainder becomes the spinal cord. This process usually completes by 28th day of pregnancy. But, if problem occurs during this process, the result can be brain disorders called neural tube defects, including spina bifida. Spina bifida, which literally means "cleft spine", is characterized by the complete development of the brain, spinal cord and/or meninges (the protective covering around the brain and spinal cord).

Etiology

The exact cause is unknown: genetic and environmental factors, malnutrition, exposure to harmful substances, inheritance (10% greater chance in 2nd child with spina bifida), folic acid deficiency. Epidemiological Factors considered in the study; sex of the patient, sex incidence in newborns, birth order of the patients, risk factors, and socioeconomic status.

Materials and methods

The study has been carried out in the paediatric surgery department at our centre. We evaluated the 60 patients with Spina Bifida at our centre with the comprehensive evaluation format, history taking format, follow up chart.

Results

The following results have been obtained:

- Incidence is more common in males.
- Incidence at birth is more in males
- Inadequate intake of folic acid and low socioeconomic status are seen in almost all of the patients.
- Maximum patients are of 1st birth order

Conclusion

Spina Bifida is one of the most common, serious malformations of human structures after congenital heart defects. It is the defect of primary neurulation that results from failure of fusion in the caudal region of the neural tube.

In this study, 60 cases of Spina Bifida have been recorded and it has been found that:

- Incidence at birth and in children with spina bifida is more in males.
- Inadequate intake of Folic acid and low socioeconomic status have been seen as the most common risk factors for Spina Bifida
- Maternal Fever during first trimester increases the risk of Spina Bifida to two to three folds.

➤ 1st and 2nd child are most commonly affected.

Publish with **BioMed Central** and every scientist can read your work free of charge

"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:
http://www.biomedcentral.com/info/publishing_adv.asp

