

Prevalence and factors associated with epilepsy among children with hydrocephalus at Cure Children's Hospital of Uganda.

Agatha Namutosi Wakama¹, Deogratias Munube¹, Mark Kaddumukasa¹, Martha Sajatovic², Edith Mbabazi Kabachelor³, Angelina Kakooza-Mwesige¹

¹Makerere University, College of Health Sciences, Kampala Uganda, ² Neurological and Behavioral Outcomes Center, University Hospitals Cleveland Medical Center & Case Western Reserve University School of Medicine, 11100 Euclid Avenue, Cleveland, OH 44106, USA, ³Cure Children's Hospital of Uganda.

INTRODUCTION

- Hydrocephalus is a common neurological disorder among children in sub-Saharan Africa.
- Estimated 700 new congenital and 4200 to 7000 new cases of infant hydrocephalus per year in Uganda
- Epilepsy amongst this population worsens their cognitive impairment and quality of life.

OBJECTIVES

- To determine the prevalence of epilepsy among children with hydrocephalus at Cure Children's Hospital of Uganda.
- To determine the factors associated with epilepsy among children with hydrocephalus.
- To compare the burden of epilepsy among children with post-infectious and non-post-infectious hydrocephalus.

METHODS

In a cross-sectional retrospective study, 278 charts were reviewed for patients <18 years with confirmed hydrocephalus attending Cure Children's hospital. Demographic data, clinical presentation, treatment and outcomes were extracted and analysed. Participants' baseline characteristics were described using proportions for categorical variables, association between predictor and outcome variables were assessed using logistic regression. Analysis was done using STATA statistical software version 15.0.

RESULTS:

278 patients with hydrocephalus were included, 75 (27%) had documented epilepsy, 50.7% (38/75) had epilepsy diagnosed before surgery

Table 1: Clinical characteristics N=278

| Variable | Frequency (%) |
|---|---------------|
| Age (days), median (IQR) | 91 (53-183) |
| Type of hydrocephalus | |
| PIH | 173(62.2) |
| NPIH | 105(37.8) |
| Type of surgery | |
| ETV+/-CPC | 163(58.6) |
| VPS | 61(21.9) |
| others | 54(19.4) |
| No. of surgeries | |
| None | 30(10.8) |
| 1 | 191(68.7) |
| >1 | 57(20.5) |
| Initial febrile illness associated with seizures | |
| Yes | 83(29.9) |
| No | 195(70.1) |

Table 2: Factors associated

| Variable | aOR (95%CI) | P-value |
|--|-------------------|---------|
| Initial febrile illness associated with convulsions | | |
| No | 1 | |
| Yes | 1.91(1.139-3.211) | 0.021 |
| No. of surgeries | | |
| 1 | 1 | |
| None | 0.67(0.234-1.503) | 0.270 |
| >1 | 1.85(1.249-2.678) | 0.012 |

| Type of HC | Epilepsy % |
|------------|-----------------|
| PIH | 35.8% (62/173) |
| NPIH | 12.3% (13/105). |

CONCLUSIONS

Persons with post infectious hydrocephalus had a higher prevalence of epilepsy. Prevention of early infections and multiple surgeries might help reduce the burden of epilepsy in this population.

REFERENCES

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Funding: NIH, award number: D43NS1185650

