Neurodevelopmental outcome of isolated ventriculomegaly: a prospective cohort study

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Objective
Data regarding the neurodevelopmental outcome of children diagnose in utero with isolated ventriculomegaly (IVM) is limited and only a minority of these studies defined IVM based on fetal MRI. Here we endeavored to assess the outcome of such cases in a large-scale, MRI-based study.

Methods
We conducted a study on 133 cases of IVM, with a documented fetal brain MRI scan, performed in a single tertiary center. All cases were diagnosed a lateral ventricle width of 10 mm or more, in at least one side. Children were assessed at ages 18 to 36 months by the Vineland Adaptive Behavior Scales (VABS).

Results
VBAS scores were within normal range. There was no significant difference between VBAS score in symmetric vs. asymmetric IVM (101.7 vs. 101.6, respectively, p=0.94), and VBAS score of mild IVM was comparable to that of moderate IVM (101.8 vs. 101, p=0.8). Only five cases (3.8%) were found to have an abnormal score (<85). There was no significant difference in the rate of abnormal scores between mild and moderate IVM (2.8% vs. 8.3%, respectively, p=0.22).

Conclusion
In this study we demonstrate that in cases of isolated ventriculomegaly, a normal neurodevelopmental outcome is to be expected, and that the outcome does not appear to be effected by the severity or asymmetry of the ventriculomegaly. Thus, following a meticulous workup including genetic, infectious and anatomic assessment by neurosonogram and fetal MRI, patients can be given a reassuring counseling regarding the child's prognosis.