Background and Aims  Children with temporary external ventricular drains are prone to nosocomial infections. Diagnosis of bacterial ventriculitis in these children is challenging due to frequent blood contamination of cerebrospinal fluid (CSF), presence of chemical ventriculitis and elevation of blood laboratory markers by concomitant bacterial infection. Therefore determination of novel marker of bacterial infection CD64in in CSF seems to be promising.

Methods  We conducted a prospective, observational pilot study enrolling children with external ventricular drainage at surgical ward and paediatric intensive care unit. CD64in in CSF together with CSF leukocyte count, glucose, proteins and blood leukocyte count, CRP, PCT were studied at the time of suspected ventriculitis. CD64in was measured by flow cytometry (Trillium Diagnostics, LLC, Brewer, ME).

Results  Ten episodes of clinically suspected ventriculitis in 6 children (male 4, female 2, median age: 9 months, range: 4–167 months) were observed during a 6-month period. Episodes were classified into those with microbiologically proven ventriculitis (5 episodes) and into those with microbiologically negative CSF (5 episodes). CD64in was significantly higher in episodes with ventriculitis in comparison to episodes without ventriculitis (Table). Other blood and CSF markers did not differentiated between groups.

Conclusions  CD64in might be a useful diagnostic marker of bacterial ventriculitis in children with external ventricular drainage before microbiological confirmation. A larger study is needed in the future.

Abstract 929 Table 1  All 285 children

Abstract 930 Table 2  197 Ethiopian children

Conclusion  In this population the predictive value of eosinophilia is weak for parasitic infection.