

Introduction: Delirium in adult ICU patients is independently associated with a 3-fold increased 6-month mortality. Even though data on delirium in children are still limited, there is increasing evidence that delirium significantly worsens outcome in critically ill children. In a prospective study, Smeets and colleagues could show that delirium in ICU children was an independent risk factor for a prolonged ICU stay. The most important step in delirium management is early recognition. Therefore, validated delirium assessment tools are essential.

Hypothesis: The objective of this study was to investigate the incidence of delirium in the same cohort of critically ill children using the criteria of the Diagnostic and Statistical Manual 4th Edition - Text Revision (DSM-IV-TR), the Pediatric Confusion Assessment Method for the Intensive Care Unit (pCAM-ICU) and the Pediatric Anaesthesia Emergence Delirium (PAED) Score. NCT01416675.

Methods: This prospective observational cohort study was approved by the institutional ethics committee (No. EA2/073/11). We included pediatric critically ill patients, at least 5 yrs of age, ventilated or nonventilated, regardless of admitting diagnosis. Exclusion criteria were non-German-speaking, inability to communicate due to severe hearing loss or brain injury, preexisting psychosis or mental retardation due to a specific diseases. Trained staff members, acting independently of routine clinical patient care, performed daily assessments with the pCAM-ICU and the PAED. In addition, a delirium-expert (board-certified psychiatrist or intensivist) used the DSM-IV-TR criteria for the diagnosis of delirium. All staff members, including the delirium expert, were blinded against the results of the other delirium assessments. Each patient was evaluated for a maximum of 21 days.

Results: Sixty-four patients were included in data analysis. According to DSM-IV-TR criteria, 23.4% (n=15) of the patients developed delirium during their ICU stay. The incidence of delirium using the pCAM-ICU worksheet was 17.2% (n=11). The assessments with the PAED (cut-off >9 points) revealed a delirium incidence of 15.6% (n=10).

Conclusions: Our results indicate the necessity for routine delirium monitoring in critically ill children. Further analysis of the reported data are needed to estimate validity of the examined scores - indeed, these findings suggest differences regarding diagnostic validity.