

Unexplained Syncope in Children

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Basics. Syncopal states are quite frequent in children's population, as 15-20% of them had at least one episode of it. A syncope of unclear etiology makes up 17-37% among all syncopes. Unexplained Syncope (UnS) can mask the most life threatening cardiogenic syncope, which can lead to sudden cardiac death. So far, diagnostics of syncope in children have been developed insufficiently.

Methods. We studied 1895 children with recurrent syncope hospitalized at the Children's Center for Cardiac Arrhythmias. Personal and family history, physical examination, including ECG, stress test, holter monitoring, tilt-table and other tests, were made. The average age was 12.1 ± 4.5 (from 1 to 17).

Results. Out of 1895 hospitalized children with recurrent syncope, 290 (15.3%) had UnS and had implanted loop recorders. Out of 290 children (49% - boys), monitoring was completed for 259 pts due to the end of a 36-month follow-up, or due to the symptom-rhythm correlation or detecting arrhythmia. Clinically positive cases (syncope and/or events) were in 50% of children. Arrhythmogenic syncope or Arrhythmogenic event were diagnosed in 31% of pts with UnS and 53.8% of clinically positive cases. Among the causes for arrhythmic syncope and events we observed both tachyarrhythmias (ventricular fibrillation) and bradyarrhythmias (asystole, AVblock).

Conclusion. The frequency of UnS in hospitalized children was 15.3%. Implantation of loop recorders in children with UnS was useful in 50%. Arrhythmogenic syncope or Arrhythmogenic event was diagnosed in 31% of pts with UnS.