

The risk factors of recurrency of vasovagal syncope in children and adolescents and the value of head-up tilt table test

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Introduction: Syncope is one of major complaint for 1% of all emergency admissions.. It is usually a benign problem, but it can be recurrent. It remains unclear who are at high risk of recurrent syncope. This study was performed to determine the long-term follow-up of children and adolescents with syncope or pre-syncope, and to analyse risk factors for recurrent syncope.

Methods: This study included 150 patients (50 male,100 female) aged between 8-18 years, undergoing a tilt test . They were subsequently followed-up in clinic visits with a final interview at the clinic or by telephone at the end of the follow-up period.

Results: Tilt table test was positive in 97 and negative in 53 patients respectively. The types of the syncope in tilt table positive group were mixed in 48 , vazodeppresor in 34 and cardioinhibitor in 15 patients. Sixty-five patients had syncope in passive phase and 32 had in provocative phase of the test .The average age ,the number of the episodes and the presence of the trauma were not statistically different between tilt positive and negative patients. During a mean follow-up of 3-78 month , recurrent syncope was observed in 27 of 100 female and 13 of 50 male patients. When comparing syncope-free children at follow-up, children with recurrent syncope had a greater number of historical syncopal spells (6,3 v.s. 2,6, $P=0.000$). The recurrency rate was higher in patients who had more than 4 episodes initially and who had syncope in the first 20 minutes of the tilt table test. The sex distribution was found similar in recurrent and non-recurrent group. The number of the episodes decreased after tilt table test ($p=0.000$; $3,86\pm 4,75$ v.s $0,73\pm 0,44$). The recurrence rate was similar between positive and negative tilt test groups (24,7% vs 30,1%, respectively; $P=0,47$).

Conclusion: Our findings demonstrated that the predictors of longterm outcome in adolescents are the total number of spells documented before admission and the occurring time of syncope during the test. The risk of syncope recurrence was found independent from head-up tilt test results.