age was 13.3±3 yrs (median 14, range 6-17). According to the Italian Protocol, children were tilted at 60° or 20 min (passive phase) and, if S did not occur, for another 15 min after 400 μg sublingual NTG administration (prophylaxis phase). Of 118 pts, 75 (66%) had a positive HUT, while 35 (31%) had a negative HUT. In 8 pts (9%) the test was interrupted because of psychomotor hyperactivity in 2 pts and severe nausea in 1 pt. Of the pts with a positive HUT; for 10 (13%) S during the passive phase, while 65 (87%) S after NTG administration. The mean time to S during HUT was 24±5 min. The mean HR and the mean SBP at S were 50±29 bpm and 35±10 mmHg respectively. Fiteen pts (20%) had tilt-induced asystole (572±2754 ms). Of 20 controls, 4 (20%) had tilt-induced S, all of them after NTG challenge. Thus the positivity rate of HUT potentiated with oral NTG was 66% and its specificity was 80%. Thirteen pts (12%) and 3 controls (15%) had light headache during HUT, after NTG administration.

In conclusion head-up tilt testing potentiated with oral nitroglycerin is a valuable and well-tolerated diagnostic test in the evaluation of children with unexplained syncope. NTG administration markedly increases the positivity rate of the test, without significantly decreasing its specificity.

**P-253** ISOPROTERENOL-ADENOSINE VS. NITROGLYCERINE: CAN WE SUBSTITUTE ONE LONG PROTOCOL WITH TWO SHORT PROTOCOLS?

E. Kozluk,1,2 I. Zastawniak1, E. Szafiedwicz2, A. Piatkowski2, P. Lodzinski2, F. Walczak2,3 G. Gubinska31 Medical University of Warsaw, Warsaw, Poland; 2Institute of Cardiology Warsaw, Poland

Due to high time consumption of head-up tilt test (HUT) there are some attempts of shortening this procedure. The aim of this study is to compare diagnostic value of two short HUT: provocation with adenosine + isoproterenol vs. full negative HUT AD, type 1 reaction was in 9 pts, type 2 - 6, type 3 - 2, TIST - 1 pt. Testing reactivity of autonomic system takes lot’s of time. It is under investigation to find method of provocations to shorten it.

**Material and methods:** 19 pts (15F, aged 29±11) with syncope supposed to be of neurogenic. All pts were examined with 3 tests (the sequence was random) with 45 min. passive phase (NTG). 19 pts (including all with negative result) performed during the same day: 1. 45 min passive HUT followed by 20 min. protocol HUTT followed by NTG provocation (total time – 85 min).

Results: Mean time to S during HUT was 24±5 min. The mean HR and the mean SBP at S were 50±29 bpm and 35±10 mmHg respectively. Thirteen pts (12%) and 3 controls (15%) had light headache during HUT, after NTG administration.

In conclusion head-up tilt testing potentiated with oral nitroglycerin is a valuable and well-tolerated diagnostic test in the evaluation of children with unexplained syncope. NTG administration markedly increases the positivity rate of the test, without significantly decreasing its specificity.

**P-254** CLINICAL ASSESSMENT OF THE PRELIMINARY RESULTS OF THE SHORT TILT TEST WITH ADENOSINE

E. Kozluk, I. Zastawniak, E. Szafiedwicz, A. Piatkowski, P. Lodzinski, M. Stawarczuk, F. Walczak, G. Opolski. 1Medical University of Warsaw, Poland; 2Institute of Cardiology Warsaw, Poland

Testing reactivity of autonomic system takes lot’s of time. It is under investigation to find method of provocations to shorten it.

Aim: Preliminary assessment of the clinical value of shortened active HUT after with low dose of isoproterenol (0,02μg/kg of body weight/min). Preliminary assessment of the clinical value of shortened active HUT after with low dose of isoproterenol (0,02μg/kg of body weight/min).

**Materials and methods:** 23 patients (19F medium age 33, SD 13). All the patients had during the same day: prolonged passive test (60 min) or 20 min. test with low dose of isoproterenol (ISO). 16 pts (including all with negative result) had another HUT (different protocols).

Results: Vasovagal syndrome was diagnosed in 20 patients, tilt induced sinus tachycardia (TIST) in 1 patient. Neurocardiogenic cause of syncope was excluded in 2 patients. During HUT ISO syncope occurred in 10 patients (sensitivity 50%), negative result - 3 (1 real negative), in 1 patient occurred syncope due to hypersensitivity do nitroglycerin (VVS excluded in another tests). Concordance of HUT results was achieved in 7 patients (type 1 – 4 pts, type 2,3 and TIST – 1 pt), two different types of reactions (ISO vs. NTG) occurred in 2 patients (1 vs.2 and 1 vs. 3). Among patients with negative HUT ISO, type 1 reaction was in 3pts, type 2 – 5, type 3 – 2.

There was no significant adverse reactions of the drugs. The results of the shortened head up tilt test with 12mg low dose of isoproterenol in our group was 50%. During ISO test tendency to underestimate cardioinhibitory results was observed.

**P-256** HEMODYNAMIC CURVES CHARACTERISTIC DURING FIRST MINUTE OF TILTING IN VASOVAGAL PATIENTS

I. Zastawniak, E. Kozluk, G. Cyluski, A. Piatkowski, P. Lodzinski, E. Szafiedwicz, A. Gasiorowska, W. Niewiadomski, G. Opolski, F. Walczak. Medical University of Warsaw, Warsaw; 2Institute of Cardiology, Warsaw; 3Izdulik Pan Warsaw, Poland

We have proved significant decrease of hemodynamic parameters like stroke volume (SV) and cardiac output (CO) during first minute of head-up tilt test (HUTT) in patients with vasovagal syncope. We advance a hypothesis that it may depend on different frequency of hemodynamic parameter variability in these two groups of patients.

**Aim:** The aim of our study was to compare the sinusoids of SV and CO at the beginning of HUTT in vasovagal and non-vasovagal patients.

**Material and Methods:** 23 patients (26 women and 16 men) aged 36±16 were subdivided in 2 groups on the base of HUTT result: positive ones (HUTT+1 - 12 pts and the control group (GK) – 11 pt. During all study we registered one channel of ECG using Holter method and measured SV and CO using impedance cardiography by means of Reomonitor. Curve of SV and CO value for each patient was drown. We calculated the time of the first positive peak of sinusoidal curve.

**Results:** The first peak of SV appeared at 12±8s (all <20s) of HUTT in patients with vasovagal syncope and at 55±18s (all >30s) in control group (p=0.0018). The first peak of CO appeared at 11±6s (all <25s) of HUTT in patients with vasovagal syncope and at 40±17s (all >25s) in control group (p=0.0018).

**Conclusions:** Different characteristic of SV and CO curves was observed during first minute of HUTT in patients with vasovagal syncope and healthy ones.

**P-257** VALSALVA MANEUVER USING BILATERAL TRANSCRANIAL DOPPLER MONITORING IN PATIENTS WITH NEUROCARDIOGENIC SYNCPE

G. Albina, R. Laino, D. Ortega, L. Barja, L. Fernandez Cisneros, R. Lagos, A. Ongier. Instituto Cardiovascular De Buenos Aires (Icb) and Instituto De Investigaciones Neurologicas (Ien)

Previous studies have shown that patients with neurocardiogenic syncope have alterations in cerebrovascular autoregulation just before syncope. A deep diacolic notch followed by a marked drop of diacolic middle cerebral artery