The utility of head-up tilting (HUTT) potentiated with nitroglycerine (NTG) for the assessment of unexplained falls has been proved in elderly patients. In addition, whether different NTG doses have impact on the sensitivity of the test was also assessed.

Methods: 56 consecutive P aged ≥65 years with syncope of unknown origin submitted to HUTT. P were tilted upright to 70 degrees for 20 minutes. Carotid sinus massage was done in basal conditions and following the assumption of the head-up tilt posture. If syncope did not occur, sublingual NTG was administered and observation continued for 20 minutes. The first 37 P (group A) received 0.5 mg of NTG and the remaining 19 (group B) received 0.25 mg. Positive responses to NTG challenge were defined as the reproduction of syncope/presyncope and classified as cardioinhibitory, vasodepressor, or mixed (according to a multicenter European working group classification). Those P showing a gradual decrease in BP after NTG followed by symptoms considered to have an exaggerated response. Electrocardiogram and BP were monitored continuously (Task Force Monitor; CNSystems).

Results: the mean age was 73.4±6.1 years for group A and 74.5±6.9 years for group B (p=NS). There were no significant differences between clinical characteristics of the groups. HUTT was positive in 51% and 53% (p=NS), negative in 32% and 42% (p=NS), or considered an exaggerated response in 16% and 5% (p=0.45) in group A and group B, respectively. Neurocardiogenic responses were classified as vasodepressor in 32% vs. 32% (p=NS), cardioinhibitory in 5% vs. 0% (p=NS) and mixed in 14% vs. 21% (p=NS) - group A vs. group B - No P experienced side effects.

Conclusion: in older P with unexplained syncope, HUTT potentiated with a lower dose of sublingual NTG provides an adequate total positive rate and may reduce the occurrence of exaggerated responses.

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The value of medical history in predicting tilt testing results

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Tilt testing (TT) is a well-established diagnostic tool in neurally mediated syncope (NMS). However, it is time consuming, requires special equipment and its value in predicting effective therapy is questionable. Symptomatology of NMS is often very typical and in some patients history alone may be sufficient to diagnose NMS which may obviate the need for TT. The aim of the study was to assess which symptoms associated with syncope can predict TT results. The study group consisted of 202 unselected patients (69 males, mean age 43±20 years) who underwent TT (70 degrees, 45 min, no pharmacological provocation) due to suspected NMS. A detailed history, including 34 variables concerning symptoms, and clinical parameters were evaluated (multivariate stepwise logistic regression, ROC curves).

Results: TT was positive in 71 (34%) patients. Of 6 variables which were significantly more frequently encountered in patients with positive TT, two - prolonged standing before syncope and sweating associated with syncope, independently predicted TT results. Sensitivity, specificity and accuracy values of the point scores based on symptoms were 86%, 38% and 56% in the whole study group, in a subgroup with a history of more 4 syncopal episodes - 75%, 87% and 81%, and in patients with more 2 syncopal spells during 1 month before TT - 88%, 91% and 90%.

Conclusions: in patients with recurrent syncope, certain details from medical history can predict TT results. Thus, TT may be omitted in these patients.