

## Tilt-table testing in syncope - our results

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**Introduction:** Syncope is defined as transient, self-limited loss of consciousness due to temporary global cerebral hypoperfusion, resulting from low peripheral resistance and/or low cardiac output<sup>1</sup>. Reported incidence of syncope is high; 18-40 per 1,000 patient-years in general population<sup>2</sup>. Tilt-table testing enables reproduction and characterization of syncope in controlled settings, according to blood pressure and heart rate response to tilting. Modified VASIS classification to tilt testing distinguishes: reflex/vasodepressor syncope, cardioinhibitory syncope with/without asystole, mixed syncope, orthostatic hypotension and POTS (postural orthostatic tachycardia syndrome)<sup>3</sup>.

**Patients and Methods:** We retrospectively analyzed 708 patients (67% female, 33% male) who underwent tilt-table testing in our institution from 2013 to September 2017. Of the referred patients 47.6% were 15-30 y/o, 29.8% were 30-60 y/o, and 22.6% were >60 y/o. Patient history included syncope in majority of patients - 84.6%, 80.1% and 68.8% of patients <30 y/o, 30-60 y/o, and >60 y/o, respectively.

**Results:** Normal reaction to tilt-up testing was found in 49.3% of young (<30 y/o) vs. 83.1% of elderly patients (>60 y/o). Tilt-up testing provoked syncope in 32.6% of patients <30 y/o in contrast to 10.9% of 30-60 y/o and 11.9% of patients >60 y/o (p<0.001). Majority of positive results were classified as vasodepressor syncope (54.9% in patients <30 y/o vs. 77.8% in >60 y/o, p<0.001), cardioinhibitory response was recorded in 10.5% of patients <30 y/o (22.2% of which had asystole), while none of the elderly patients had such type of response (p=0.003). Mixed syncope was found in 34.5% of young (<30 y/o) vs. 22.2% of elderly (>60 y/o) patients, p<0.001.

**Conclusion:** Our result analysis found majority of positive tilt-table test results in younger patients, while >83% of elderly patients had normal reaction to testing, thus questioning widespread use of tilt-table testing in this age group. Mechanisms underlying syncope should be sought in order to properly diagnose and counsel patients for syncope avoidance. Only a minority of younger patients had cardioinhibitory syncope, and none during four analyzed years required pacemaker implantation. Elderly patients with syncope should be evaluated using alternative diagnostic algorithms.

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### LITERATURE

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