**OBJECTIVES**

The studying of the influence of melatonin on the development of MS in inversion of the cycle «day/night».

**METHODS**

Group “A” (n=25), patients with MetS (the National Cholesterol Education Programs Adult Treatment Panel) and inversion of the cycle <day/night> (at least two night shift a week for 6 and more years), group “C” (n=23), healthy people, working in day shifts. Blood pressure (BP) has been monitored for 24 yours. It’s determined waist circumference (WC), high-density lipoproteins (HDL) fasting triglycerides (TG), fasting glucose. The melatonin secretion has been determined according to excretion 6-sulfatoxymelatonin (MT6S) in urine.

**RESULTS**

Total MT6S in both groups was equal, p=0.077. MT6S at 4 a.m. in group “A” (25.3 95% CI: 17.8-32.8 ng/ml) was less p<0.014. Night MT6S in group “A” (10.2 95% CI: 7.3-13 ng/ml) was higher p<0.001. MT6S at 4 a.m. was connected with BP (r=-0.34), TG (r=-0.34), HDL (r=0.26), glucose (r=-0.38), p<0.05. Correlation has been determined between the day MT6S and WC (r=-0.28, p<0.05). When the peak secretion of melatonin decreases, it’s determined increasing the risk of abdominal obesity (OR 1.8, 95% CI: 0.8-3.7; p<0.05), hypertension OR 1.6 (95% CI: 0.8-3.4; p<0.05) risk of nocturnal hypertension (OR 1.6, 95% CI: 0.8-3.4; p<0.05), hypertriglycerides (OR 1.4, 95% CI: 0.7-2.1; p<0.05), HDL decreasing (OR 1.7, 95% CI 0.9-2.6, p<0.05).

**CONCLUSIONS**

During the long inversion of the cycle «day/night», disturbance of melatonin secretion leads to the development of metabolic syndrome.