**EFFECT OF SEXUAL ACTIVITY ON CARDIAC AUTONOMIC FUNCTION IN HIGH-LEVEL MALE ATHLETES**

**J.M. Sztajzel1**, K. Sievert1, A. Bayes de Luna2

1Cardiology Service, University Hospital, Geneva, Switzerland, 2Institut Català Ciències Cardiovaculars, San Pau Hospital, Barcelona, Spain

Objective and methods: In order to determine the effects of sexual activity on the cardiac autonomic function in athletes, we have submitted a group of 15 high-level male athletes, mean age 28±4 years, to two days of testing comparing a day with to a day without sexual activity (control day). On each test day, the participants performed two maximal stress tests (MST), one at 8.30 am and one at 4.30 pm. The sexual intercourse (SI) took place at 6.30 am. Each athlete was under a continuous 24-hour Holter recording, from which the spectral heart rate variability parameters were retrieven and expressed in normalized units (nu).

Results: During the SI (6.30 am) there was a significant increase of the low frequency (LF) component from 55±9 to 95±16 nu (p<0.05), suggesting sympathetic overdrive, and a significant decrease of the high frequency (HF) component from 34±8 to 5±2 nu (p<0.01), reflecting vagal withdrawal. While the LF component normalized 30 minutes after the SI, the HF component remained lower, when comparing to the control day, until the beginning (8.30 am) of the morning MST, at peak of effort, during post-effort and returning to baseline one hour (10.00 am) after the test was finished. No significant differences were observed between both test days during the afternoon MST (4.30 pm).

Conclusions: Our findings show that sexual activity produces a sympathetic overdrive of short duration (30 minutes) and a vagal withdrawal, which is of much longer duration (approximately 3 ½ hours) and which may have an adverse influence on an athlete’s performance.