

**ANALYSIS OF PLASMA BETA-ENDORPHINS IN SILENT OR SYMPTOMATIC MYOCARDIAL ISCHEMIA DURING PTCA**

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Among a large number of endogenous substances involved in pain modulation, beta-endorphins play an important role. Aim of this study was to verify short-term variability of beta-endorphins plasma levels and the possible correlation with presence or lack of pain during myocardial ischemia induced by PTCA. Twenty-four consecutive male patients (mean age  $51.5 \pm 5$ ) with ischemia during ergometric stress testing and with coronary artery disease documented by angiography were selected for this study.

In all patients were performed exercise stress testing and percutaneous transluminal coronary angioplasty (PTCA). Blood samples for the determination of beta-endorphins were taken from all patients between 9 and 11 a.m. at rest, the day before scheduled PTCA and 15 minute before the procedure. Blood samples were centrifuged at 4°C and plasma was purified on Sepharose particles for extraction of beta-endorphins. Beta-endorphins were analysed by a beta-endorphin 125I radioimmunoassay kit (Incstar-Corporation by Techno-genetics). The day before the performance of PTCA beta-endorphins plasma levels were  $5.1 \pm 1.9$  pg/ml, the next day, 15 minutes before PTCA, were  $5.6 \pm 2.1$  pg/ml. Eight patients had silent PTCA-induced myocardial ischemia, sixteen patients referred symptoms during the procedure.

Beta-endorphins plasma levels were  $7.3 \pm 3.7$  pg/ml in asymptomatic patients and  $3.7 \pm 2.5$  pg/ml in remaining 16 patients with symptoms during PTCA-induced myocardial ischemia. In conclusion in patients with coronary artery disease beta-endorphins plasma levels were similar in two consecutive days confirming the lack of short-term variability. Beta-endorphins plasma levels were significantly higher ( $p < 0.05$ ) in patients with silent myocardial ischemia during PTCA as regards to symptomatic ones.