

**Different Long-term Prognosis according to Response to High versus Low Acetylcholine Dose in Patients with Significant Coronary Artery Spasm**

**Purpose:** Acetylcholine (Ach) provocation test is a useful method to diagnose coronary artery spasm (CAS). There have been limited studies investigated whether there are differences in clinical characteristics and long-term prognosis according to the response to Ach dose.

**Methods:** A total of 1,190 consecutive patients (pts) without significant CAD who underwent Ach provocation test between Nov. 2004 and Oct. 2010 were enrolled. Ach provocation was performed by incremental intracoronary injection of 20 (A1), 50 (A2) and 100 (A3)  $\mu$ g into left coronary artery. Pts were divided into two groups according to the positive response to 1) Low dose group (A1&A2, n=525), 2). High dose group (A3, n=665) and evaluated the incidence of recurrent angina and clinical outcomes up to 5 years

**Results:** The low dose group had a higher incidence of recurrent angina requiring repeat CAG and major adverse cardiac & cerebrovascular events (MACCE-2) at 5 years (Table). The low Ach dose was not an independent predictor of MACCE (OR; 1.20, 95% C.I; 0.63-2.30, P= 0.58). Only the presence of FCL was associated with repeat CAG (OR; 3.20, 95% C.I; 2.28-4.49, P=0.000) and MACCE (OR; 6.27, 95% C.I; 3.17-12.41, P=0.000).

**Conclusions:** Pts with significant CAS responded to low Ach dose was associated with higher incidence of repeat CAG suggestive of more vulnerable response to Ach but was not associated with composite of hard adverse cardiovascular events up to 5 years. Only presence of FCL was associated with long term adverse clinical outcomes.