

## 学会/受賞報告書

ESC Congress 2011 (ヨーロッパ心臓病学会)  
臨床研究部門 若手研究者賞 (Young Investigators Award)  
受賞

循環器内科学分野 大学院 4年生  
高木 祐介



8月27～31日にパリで開催された ESC Congress 2011 (ヨーロッパ心臓病学会)におきまして、臨床研究部門の「Young Investigators Award」を受賞しました。受賞演題は、循環器内科学分野に事務局をおく冠攣縮研究会で実施された多施設共同研究の解析結果であり、冠攣縮性狭心症の診断として行われる冠攣縮誘発試験の検査所見および不整脈合併症と、予後との相関を検討したものです。日常臨床で感じる疑問点から着想を得た本演題が評価されたことは、非常に大きな喜びです。

この度の成果は、冠攣縮研究会にご参加の先生方のご支援の賜物と感謝申し上げます。また、大学院の4年間を通じ親身にご指導頂きました安田聡准教授(現国立循環器病研究センター心臓血管内科部門長)と、このような全国規模の研究の機会を与えて頂いた下川宏明教授の御厚意に深謝いたします。本受賞を励みとして、より一層の努力を重ねてまいりたいと思います。

受賞研究：

Clinical Implications of Provocation Tests of Coronary Artery Spasm: Safety, Arrhythmic Complication and Type of Spasm -A Report from the Nationwide Multi-Center Registry by the Japanese Coronary Spasm Association-

Yusuke Takagi, Satoshi Yasuda, Yasuhiro Ogata, Tetsuya Sumiyoshi, Toshikazu Goto, Yasuhiko Tanabe, Shozo Sueda, Satoshi Ogawa, Hisao Ogawa, Hiroaki Shimokawa

抄録：

**Background:** Provocation tests of coronary artery spasm are useful for diagnosis of vasospastic angina (VSA). However, the prognostic impact of arrhythmic complications, including ventricular tachycardia (VT), ventricular fibrillation (VF) and brady-arrhythmias, and that of types of the spasm remain to be elucidated.

**Methods:** In the nationwide multicenter registry study by the Japanese Coronary Spasm Association, a total of 1,429 VSA patients (M/F, 1,090/339; median 66 years) were enrolled between September 2007 and December 2008 from 47 institutes, including 1,244 patients (87%) who underwent provocation tests of the spasm. During a median follow-up period of 32 months, the incidence of arrhythmic complications during provocation tests, types of vasospasm (e.g., diffuse, focal, or mixed) and the clinical outcomes of patients with provocation-related VT/VF were evaluated.

**Results:** The provocation tests were performed with either acetylcholine (ACh, 57.3%), ergonovine (Erg, 40.0%), both of them (1.8%) or others (e.g. hyperventilation, 0.9%). The incidence of coronary spasm of the left anterior descending coronary artery, left circumflex coronary artery and right coronary artery was 54%, 25% and 56%, respectively. Multivessel spasm was documented in 30% of patients. During the provocation tests, VT/VF, AV block and cardiac arrest developed at a rate of 3.2, 0.6 and 0.2%, respectively. Overall incidence of arrhythmic complications was 6.8%, a comparable incidence of those during spontaneous angina attacks (7.0%). The patients with provocation-related VT/VF, as compared with those without VT/VF, were characterized by higher proportion of female (40 vs. 24%,  $P=0.02$ ), higher incidence of multi-vessel spasm (45 vs. 30%,  $P=0.03$ ), diffuse-type spasm (76% vs. 50%,  $P=0.006$ ) and clinical manifestations of typical midnight to morning attacks (55 vs. 37%,  $P=0.01$ ). In addition, the incidence of provocation-related VT/VF was significantly higher with ACh compared with Erg (ACh 4.9 vs. Erg 0.8%,  $P<0.001$ ). The survival rate free from

the major adverse cardiac events (MACE), including cardiac death, non-fatal myocardial infarction, hospitalization due to unstable angina or heart failure and appropriate implantable cardioverter defibrillator shock, was comparable between patients with and those without provocation-related VT/VF (93 vs. 92% at 5 years,  $P=0.90$ ). Among the 1,121 patients in whom type of the spasm was characterized as focal ( $n=471$ ), diffuse ( $n=569$ ) and mixed ( $n=81$ ), the group with mixed-type spasm had a significantly higher incidence of 5-year MACE than the other 2 groups (mixed type 16% vs. focal type 7%, diffuse type 8%;  $P<0.01$ ).

**Conclusions:** These results indicate that the provocation test for coronary vasospasm is safe with a low incidence of arrhythmic complications and that the type of the spasm may affect the prognosis of VSA patients.