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A Novel Risk Score for Predicting MACE in Patients with Vasospastic Angina

Hiroaki Shimokawa, MD, PhD

CardioExchange Editor-in-Chief, Harlan Krumholz, interviewed Hiroaki Shimokawa about his research group's [Journal of the American College of Cardiology study](#), in which they developed a comprehensive clinical risk score for vasospastic angina (VSA) patients using a patient database of the multicenter registry study by the Japanese Coronary Spasm Association (JCSA).

The JCSA risk score includes 7 predictors of major adverse cardiac events (MACE), to which each is assigned an integer score: history of out-of-hospital cardiac arrest (4 points), smoking, angina at rest alone, organic coronary stenosis, multivessel spasm (2 points each), ST-segment elevation during angina, and beta-blocker use (1 point each). The 3 risk strata include low (score 0 to 2), intermediate (score 3 to 5) and high (score 6 or more). The incidences of MACE in the low-, intermediate-, and high-risk patients studied were 2.5%, 7.0%, and 13.0%, respectively ($p < 0.001$).

Krumholz: Is there any reason to believe that Japanese patients with spasm differ from patients elsewhere? What do you think about the generalizability of your findings?

Shimokawa: Many doctors used to think so, especially for the prevalence of the spasm. However, our ongoing international registry study, including Japan, Korea, U.K., Germany, Italy, and Australia, suggests that the differences in coronary spasm between Japanese (Asians) and Caucasian patients may not be so large. Indeed, the preliminary findings by Robert-Bosch-Hospital in Stuttgart, Germany, suggest that German patients have a similar prevalence of coronary spasm (VSA) as Japanese patients.

Krumholz: You identify predictors of adverse cardiac events. Beta-blocker treatment was an important predictor. Do you think that beta-blocker therapy was the cause? Should it be contraindicated in these patients?

Shimokawa: Our message is that beta-blockers could be dangerous for VSA when used as a monotherapy. However, we consider that beta-blockers can be used safely when combined with calcium channel blockers.

Krumholz: How do you suggest that clinicians use the information from this article? Do you have an app or website for ease of use? Are there other risk scores for patients with spasm?

Shimokawa: To the best of our knowledge, this is the first score for VSA in the world. I think that our findings with Japanese VSA patients could be applicable for Western patients with the disorder. The Japanese Circulation Society (JCS) guidelines for treating VSA are available for free [on their website](#). We are currently revising the guidelines to include the novel risk score, and they will soon be published in [Circulation Journal](#), the official journal of the JCS.