

ASNC/JSNC JOINT SYMPOSIUM—REVIEW ARTICLE

Focus Issue: Cardiac Sympathetic Nervous System Imaging from JSNC/ASNC Joint Session in 26th JSNC Annual Scientific Meeting

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Abstract

Cardiac sympathetic dysfunction is closely associated with risk of cardiac events in heart failure (HF), indicating HF progression and sudden cardiac death by lethal ventricular arrhythmia. For cardiac sympathetic nervous system imaging, ¹²³I-meta-iodobenzylguanidine (MIBG), among other agents, has been approved by the Japanese health and welfare ministry and is widely used in clinical settings. ¹²³I-MIBG was also approved by the Food and Drug Administration (FDA) in the United States of America (USA) and is expected to achieve broad acceptance. In Europe, ¹²³I-MIBG is currently used only for clinical research. Given the current situation, the American Society of Nuclear Cardiology (ASNC) and the Japanese Society of Nuclear Cardiology (JSNC) are preparing to issue clinical guidelines for ¹²³I-MIBG imaging in *Ann Nucl Cardiol*.

Keywords: ¹²³I-MIBG, Arrhythmia, Guidelines, Heart failure, Sympathetic nervous system
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Under the direction of Dr. Yamashina and Dr. Nakajima, president-elect of the Japanese Society of Nuclear Cardiology (JSNC), the JSNC is seeking to increase international collaboration with the American Society of Nuclear Cardiology (ASNC) (1). As part of their initial scientific collaboration, ASNC and JSNC are planning to establish guidelines for ¹²³I-meta-iodobenzylguanidine (MIBG) imaging. In the United States of America (USA), the Food and Drug Administration (FDA) approved ¹²³I-MIBG for clinical use on March 2013. In contrast, the Japanese Ministry of Health, Labor, and Welfare (JMHLW) approved ¹²³I-MIBG for clinical use and began reimbursement in 1993 (2). Since that time, the Japanese nuclear cardiology community has developed ¹²³I-MIBG imaging and has conducted several studies (3). The guidelines of the Japanese Circulation Society (JSC) also include indications for clinical use of ¹²³I-MIBG (4). Japanese experience in this area will play an important role in the establishment of the new ¹²³I-MIBG imaging guidelines. In this first ASNC/JSNC joint session, experts from JSNC and

ASNC discussed the current status of and future directions for ¹²³I-MIBG imaging.

Next steps for ¹²³I-MIBG imaging

As previously mentioned, Japanese research groups have extensively shown the clinical usefulness of ¹²³I-MIBG (5). Nakata et al. reported Japanese pooled data on heart failure (HF) (6). This pooled data revealed the long-term prognostic value of ¹²³I-MIBG imaging. The prognostic markers of ¹²³I-MIBG include heart-to-mediastinum ratio (HMR) in early image and delayed image. These semi-quantitative data are widely used; however, there was no standardized data analysis until Nakajima and his colleagues established standard approaches to ¹²³I-MIBG data analysis (7-9). Nakajima and his colleagues are working with several international research groups to transform standard approaches to ¹²³I-MIBG imaging in Europe and the USA. In Europe, although some research groups have shown the prognostic value of ¹²³I-MIBG imaging in well-designed trials (10), ¹²³I-MIBG has not been approved

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for clinical use there (11).

During our discussion at the ASNC/JSNC joint session, we noted the importance of conducting multi-national and multi-center trials with large sample sizes. Data from such trials would help to confirm the usefulness of ^{123}I -MIBG imaging and could hasten the approval process in countries beside Japan and USA.

Conclusions

The first ASNC/JSNC joint session at the 26th annual scientific meeting of JSNC revealed the importance of ^{123}I -MIBG in the development of sympathetic nervous system imaging. We hope this joint session will lead to further inspiration and collaboration between the two societies.

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Conflicts of interest

None

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