



# Clinical Utility of Combined Optical Coherence Tomography and Near-Infrared Spectroscopy for Assessing the Mechanism of Very Late Stent Thrombosis

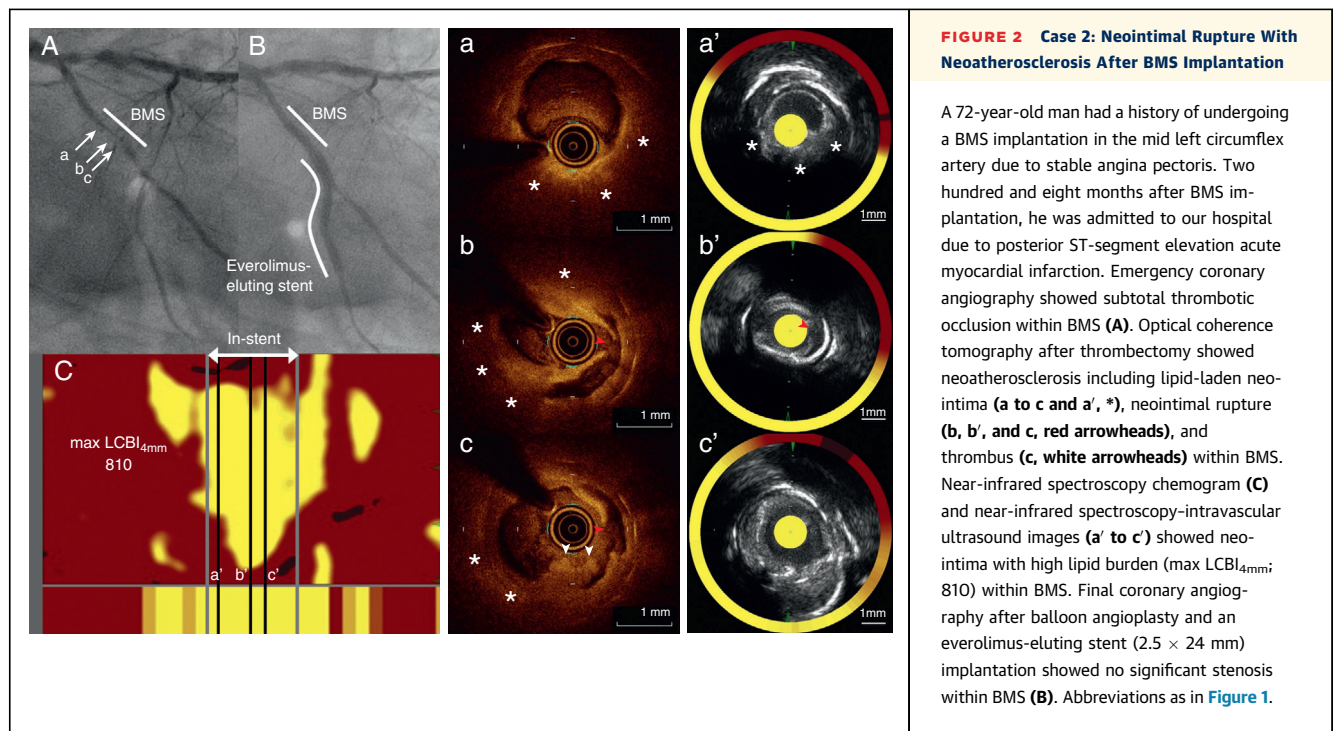
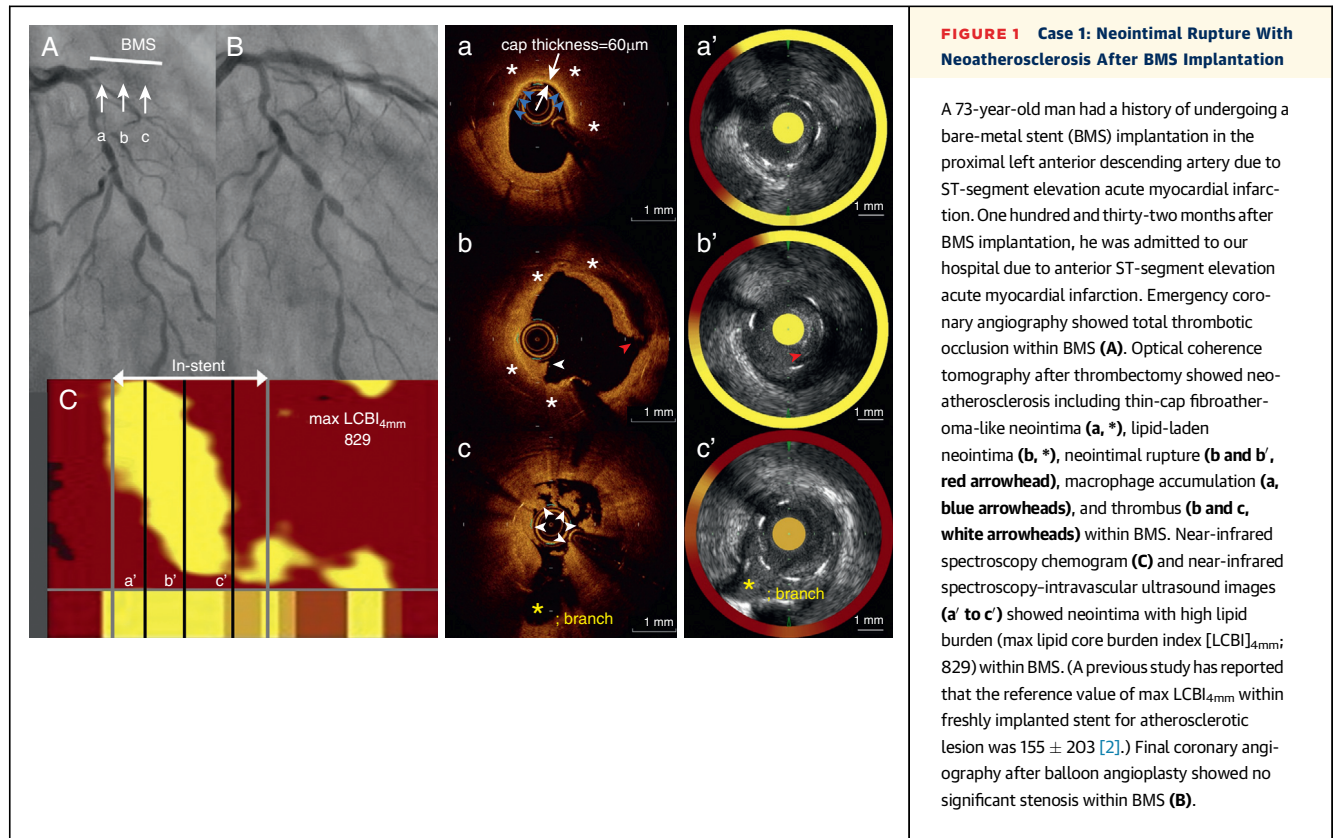
Yasushi Ino, MD, PhD, Takashi Kubo, MD, PhD, Takeyoshi Kameyama, MD, PhD, Kunihiro Shimamura, MD, Kosei Terada, MD, Yoshiki Matsuo, MD, PhD, Hironori Kitabata, MD, PhD, Yasutsugu Shiono, MD, PhD, Manabu Kashiwagi, MD, PhD, Akio Kuroi, MD, PhD, Naoki Maniwa, MD, Shingo Ota, MD, PhD, Yuichi Ozaki, MD, PhD, Atsushi Tanaka, MD, PhD, Takeshi Hozumi, MD, PhD, Takashi Akasaka, MD, PhD

**VERY LATE STENT THROMBOSIS (VLST) IS A QUITE RARE BUT SERIOUS COMPLICATION THAT OFTEN** results myocardial infarction or cardiac death. In various cases of VLST (**Figures 1 to 4**), neoatherosclerosis with neointimal rupture has been shown to be a major contributor to VLST. Histologically, neoatherosclerosis is characterized by accumulation of lipid-laden foamy macrophages within the neointima with or without necrotic core formation (1). Optical coherence tomography (OCT) is capable of detecting not only neoatherosclerosis characterized by lipid-laden neointima but also thrombus formation and/or neointimal rupture. However, there are concerns with OCT regarding the potential overdiagnosis of neoatherosclerosis (1). OCT can misjudge the neointima covered by thrombus as lipid-laden neointima. Near-infrared spectroscopy (NIRS) is the established imaging device that can discriminate lipid-laden plaque with high sensitivity and specificity by analyzing light absorption of coronary tissue components. In addition, a previous study (2) demonstrated the ability of NIRS-intravascular ultrasound to detect lipid-laden neointima within a stent. Findings on combined OCT and NIRS can provide the precise mechanism of VLST in vivo.

---

From the Department of Cardiovascular Medicine, Wakayama Medical University, Wakayama, Japan. Dr. Kubo has received lecture fees from St. Jude Medical and Terumo. Dr. Shiono has received consulting fees from Philips Volcano. Dr. Akasaka has received lecture fees from St. Jude Medical, Terumo, and Abbott Vascular; and research grants from St. Jude Medical, Terumo, and Abbott Vascular. All other authors have reported that they have no relationships relevant to the contents of this paper to disclose.

Manuscript received June 26, 2017; revised manuscript received October 31, 2017, accepted November 9, 2017.



Download English Version:

<https://daneshyari.com/en/article/8663521>

Download Persian Version:

<https://daneshyari.com/article/8663521>

[Daneshyari.com](https://daneshyari.com)