



## Editorial

## Coronary aneurysm associated with systemic inflammatory diseases: How to treat?

Coronary aneurysm is rarely found during coronary angiography. Systemic inflammatory disease such as Kawasaki disease [1,2] and Behçet's disease [3] are possible causes of giant coronary aneurysm. In addition, interventional procedures can also be responsible for iatrogenic coronary aneurysm (pseudoaneurysm). Coronary aneurysm has the potential risk for coronary rupture [2] as well as myocardial infarction due to coronary thromboembolism [4]. According to the Japanese guidelines for diagnosis and management of cardiovascular sequelae in Kawasaki disease, antithrombotic therapy using warfarin plus aspirin is recommended for patients with giant coronary aneurysm to prevent coronary thromboembolism [5]. Recently, Suda et al. reported that the long-term prognosis of patients with Kawasaki disease complicated by giant coronary aneurysms is moderately good with multiple catheter or surgical interventions [6]. Despite the favorable long-term prognosis, it is still unknown how to prevent coronary rupture in patients with giant coronary aneurysms associated with systemic inflammatory diseases.

In this issue of the journal, Soofi et al. report an interesting case with giant coronary aneurysm associated with Behçet's disease [7]. The huge coronary aneurysm and a severe stenotic lesion of the left anterior descending coronary artery were successfully treated with a drug-eluting stent and a polytetrafluoroethylene (PTFE)-covered stent. Although PTFE-covered stent is a possible treatment strategy for a giant coronary aneurysm, its use is limited to coronary perforation in Japan. Also, it is uncertain if vasculitis affects implanted PTFE-covered stents. As the authors discuss in their case report, stenting to the coronary arteries with inflammation may further cause pseudoaneurysmal formation late after intervention. Therefore, the case should be carefully monitored using angiography or multidetector computed tomography with respect to the long-term durability of the PTFE-covered stent. Another possible intervention to treat large coronary aneurysm like this case is a coil embolization [8,9]. Recently, stent-assisted coil embolization to treat fusiform [8] or saccular coronary aneurysm [9] have been reported.

One of the limitations of this case report is a lack of intravascular ultrasound (IVUS) imaging. As the authors admitted, differential diagnosis between true and pseudo-aneurysm could not be made by coronary angiography alone. A previous IVUS study demonstrated that only 27% of the angiographically diagnosed coronary aneurysms were categorized as "true" aneurysms and 4% were

categorized as "pseudo" aneurysms [10]. Although long-term durability of catheter-based interventions for giant coronary aneurysms associated with systemic inflammatory diseases needs further investigation, interventional cardiologists should be familiar with these less invasive, possibly effective interventional strategies for giant coronary aneurysm.

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Hiroyuki Okura (MD, FJCC)\*

Division of Cardiology, Kawasaki Medical School, 577  
Matsushima, Kurashiki, Okayama 701-0192, Japan

\* Tel.: +81 86 462 1111; fax: +81 86 462 1199.

E-mail address: [hokura@fides.dti.ne.jp](mailto:hokura@fides.dti.ne.jp)

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