

Press Release

For Immediate Release

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Social support is an important factor in determining antiplatelet therapy compliance after drug-eluting stent implantation in local population

Patients with medicated heart stents (drug-eluting stents) who stop taking anti-clotting drugs (antiplatelet drugs) run the risk of developing complications. Current guidelines recommend dual-antiplatelet therapy (typically aspirin plus clopidogrel) for 12 months after medicated stent implantation.

A study by the National University Heart Centre Singapore (NUHCS) was conducted to determine the incidence and predictors of premature discontinuation of antiplatelet therapy after medicated stent implantation among patients in Singapore. A total of 207 patients who underwent drug-eluting stents (DES)1 implantation between 30th January 2007 and 31 December 2007 were followed up after one year. The research was published in the August 2011 issue of the Internal Medicine Journal.

Antiplatelet therapy is an essential medication for patients with coronary artery disease. Its role in patients who have received a medicated stent is even more important, because antiplatelet therapy prevents clogging of the stent. Premature discontinuation of antiplatelet therapy is an important cause for stent clogging which often results in a heart attack.

At one-year follow-up, 4 patients died and the remaining 203 patients formed the study population. The incidence of premature discontinuation of antiplatelet therapy was 12.8% (n=26). Among these 26 patients, 12 stopped aspirin; 9 stopped clopidogrel; 5 stopped both). The median duration between stent implantation and discontinuation of antiplatelet therapy was 2.8 months.

The research also investigated the reasons for premature drug discontinuation. It was found that 1 patient stopped the antiplatelet therapy due to high cost, 1 for gastric discomfort, 3 for allergy, 3 for bleeding complications, 7 for advice from general practitioners and 11 for no reason. Among the medical and social parameters studied, living alone without a caregiver was the only independent predictor of premature discontinuation of antiplatelet therapy. The risk among those living alone was 5 times as high as those living with a family.

“At NUHCS, we have seen patients presenting with heart attack after prematurely discontinuing the antiplatelet therapy. It is crucial that patients, general practitioners and family members understand the importance of prolonged (12 months) dual antiplatelet therapy after medicated stent implantation. Our study highlights the importance of family



Yong Loo Lin School of Medicine
& Faculty of Dentistry

Press Release

support in ensuring drug compliance in our local population. Finally, cardiologists may need to evaluate social support of the patients before deciding the use of medicated stents versus bare stents”, said Associate Professor Ronald Lee Chi-Hang of the National University Heart Centre, Singapore.

¹ Drug eluting stents, also known as “medicated stents” or “drug coated stents” have emerged over the years as an effective device in treating blockages of the heart arteries among patients in Asia due to its significant reduction in risk of restenosis compared with bare metal stents. However, blood clogging of the stent (also known as stent thrombosis) remains a major limitation for this device.

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About the National University Health System (NUHS)

The National University Health System (NUHS) groups the National University Hospital (NUH), the NUS Yong Loo Lin School of Medicine, the NUS Faculty of Dentistry and the Saw Swee Hock School of Public Health under a common governance structure to create synergies to advance health by integrating clinical care, research and education.

The enhanced capabilities and capacity will enable the NUHS to deliver better patient care, train future generations of doctors more effectively and bring innovative treatments to patients through groundbreaking research.

For more information about the NUHS, please visit www.nuhs.edu.sg



Yong Loo Lin School of Medicine
& Faculty of Dentistry

Press Release

About the National University Heart Centre, Singapore

The National University Heart Centre, Singapore (NUHCS) brings together the resources, expertise and capabilities in the areas of Cardiology, Cardiothoracic and Vascular Surgery to better meet the needs of the growing number of patients with heart disease. A key centre for the treatment and management of complex cardiovascular diseases, its core clinical programmes include heart failure, structural heart disease, acute coronary syndrome, vascular medicine and therapy, women's heart health and heart rhythm.

Comprising a team of cardiovascular specialists and experts from a multitude of medical and surgical disciplines, the NUHCS provides a comprehensive and holistic approach to the treatment of patients with heart problems. This approach is backed by cutting edge knowledge and information gathered by the Cardiovascular Research Institute (CVRI).

The CVRI focuses on developing niche research work in creating new knowledge in support of NUHCS' core clinical programmes by working in close collaboration with both local and international renowned research institutes such as the Agency for Science, Technology and Research (A*STAR) and New Zealand's Christchurch School of Medicine and Health Sciences.

Partnerships are formed with various medical institutes as NUHCS is a selected training centre for international physicians. Education and training ensures that our medical professionals are kept abreast. Nurturing the next generation, our specialists are also actively involved in conducting workshops and teaching programmes for our medical undergraduates.



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