Mini-Medical School



Instructions for Coronary Artery Drug-Eluting Stent 冠狀動脈血管支架置放術後說明(英文)

Name of Medical Device: Coronary Artery Drug-Eluting Stent

Description of Medical Device

Drug-eluting stent is a type of stent coated with drug. Drug-eluting stent can effectively prevent the re-stenosis inside the artery while the design of drug-eluting stent aims to directly and stably elute drug from the surface of stent to the vascular wall. The eluting rate of drug dosage can concurrently and effectively prevent in-stent re-stenosis without affecting the healing of endothelial cell of blood vessel), which can reduce the likelihood of secondary Percutaneous Coronary Interventions after stentimplantation.

The stent reimbursed by national health insurance is the bare-metal stent which the short-term effect is similar to drug-eluting stent. However, long-term statistics suggest that the re-stenosis rate of bare-metal stent in first year reaches to 15-30 %. Drug-eluting stent can reduce stent re-stenosis rate to 5-10 %. Drug-eluting stent can also reduce the likelihood of re-Percutaneous Coronary Interventions in the long run. Due to the current limitation of national health insurance reimbursement, patients will need to pay for the drug-eluting stent at own expense and must fully discuss to your physicians prior to receiving Percutaneous Coronary Interventions.

Time to Use

In case of discovering severe intra- coronary artery stenosis from the cardiac catheterization examinations, physicians will keep the blood vessels patent through the installation of stent. As above mentioned, compared with the bare-metal stent reimbursed by national health insurance, drug-eluting stent features better patency in the long run. For

this reason, the problem with re-stenosis becomes more evident after adopting drug-eluting stent in patients with diabetes, chronic kidney disease or the patient discovered of diffuse lesion through coronary angiography, lesion of smaller blood vessel diameter, and bifurcation lesions. Additionally, it is suggested that the drug eluted stent was the first consideration for the complex or high-risk lesion, such as left main coronary artery lesion, coronary artery ostial lesion, chronic total occlusion lesion, and severe calcification lesion.

Possible Side Effect and Contraindication

The side effect and complication likely to occur after the Percutaneous Coronary Interventions could still occur in the drug-eluting stent implanted group Moreover, the drug-eluting stent can prevent in-stent stenosis by exhibit the excess proliferation of Endothelial cell, thereby delaying the time of blood vessel healing after metal stent implantation. For this reason, the bare-metal stent has slightly increased risk of thrombus, with approximately 0.5% of occurrence rate in 6 months before stent implantation and could more easily occur to patients failing to take dual anti-platelet agent regularly.

The contraindications and relative prohibitions for drug-eluting stent include the follows:

- 1. Patients sensitive toward drug-eluting stent or polymer.
- 2. Patients expected not able to take dual anti-platelet agent over the long run: Patients with acute bleeding, sensitive to antiplatelet drug and those about to receive a major surgery.
- 3. Patient' s conditions not suitable for Percutaneous Coronary Interventions: The areas are not suitable for stent inplanted or come with high risk, patients with other major disease that the attending physician think that it is appropriate to surgery.

Instructions for Drug-Eluting Stent Care

After the treatment with Percutaneous Coronary Interventions, the physician will prescribe dual anti-platelet agents (DAPT) to prevent the relapse of cardiovascular disease and the stent thrombosis. These two anti-platelet agents are aspirin and another anti-platelet drug (ticagrelor, or clopidogrel). Under normal circumstance, patients with coronary artery heart disease are suggested to take a type of anti-platelet agent for the rest of their life, usually aspirin. After installing drug-eluting stent, the patients must take another type of anti-platelet agent for 6 months to 1 year. After the percutaneous coronary intervention, you must follow the medical order to take all drugs. In case any other physician asks to

you suspend the drug, you must consult with the physician from the Department of Cardiology if drug suspension is needed.

Moreover, the patients must take anti-platelet agent over the long-run after installing the stent. You must inform physicians from other department that you have received stent installing treatment and your current drug administration, particularly when you are receiving a dental treatment, endoscopic therapy, or other invasive surgical therapy.

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