A Stent Thrombosis 1465 Days After Implantation

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CASE REPORT

SUMMARY

Stent thrombosis is a fatal complication in patients after percutaneous coronary intervention. We report drug eluting stent thrombosis occurred over four years after implantation.

Key words: drug eluting stents, thrombosis, coronary angiography.

1. INTRODUCTION

Percutaneous coronary interventions (PCI) with drug eluting stents (DES) reduced restenosis rate (1). However, safety of DES due to stent thrombosis (ST) is a major concern.

We present very late sirolimus eluting stent (SES) thrombosis occurred 1465 days after implantation.

2. CASE REPORT

A 60-year-old man, a smoker presented with two hours after the beginning of chest pain. The patient had undergone PCI for the deployment of a SES (2.75mm diameter, 28 mm long) in the left anterior descending coronary artery (LAD) in 2006. He took clopidogrel for 6 months and continued taking aspirin. The physical examination was unremarkable. The ECG showed ST segment elevation in anterior leads. Coronary angiography elicited a total occlusion of the SES (Figure 1). A loading dose of 600 mg clopidogrel, heparin (10.000IU) and a glycoprotein IIb/IIIa antagonist (tirofiban) were administered. After manually aspiration of the thrombus, a BMS (3.0 mm diameter, 32 mm long) was implanted at 14 atm. The chest pain resolved quickly and good TIMI3 flow in LAD was achieved (Figure 2). The hospital course was uneventful and the patient was discharged four days later in good condition. He has been advised to continue on aspirin and clopidogrel indefinitely.

3. DISCUSSION

Clinical trials showed reduced target-lesion revascularization with DES. However, ST is a major limitation. Although most ST have been documented within the first 30 days, DES thrombosis may occur up to 4 years with annual incidence of 0.4-0.6% (2). Premature anti-platelet therapy discontinuation, renal failure, bifurcation lesions, diabetes, and low ejection fraction were identified as predictors of ST (3).

Figure 1. Total occlusion of the left anterior descending artery in apical view.

The Academic Research Consortium (ARC) classified stent thrombosis according to the time; early (1day), sub-acute (1-39 day), late (30-360 day) and very late (>1 year) and level of certainty of stent thrombosis; definitive or probable (4).

It is unclear that very late ST is related to implantation of DES. ST occurs equally in DES and BMS when ARC criteria used (5). However, meta-analyses using per-protocol definition of ST showed higher very late ST with that DES (6).

Previously, only three DES thrombosis four years after implantation have been reported (7). All these patients had received SES for LAD stenosis. All patients were stop taking clopidogrel and two of these patients were on aspirin during the incident. Our patient took clopidogrel for only

Figure 2. Final result in apical view.

six months but he was on aspirin before admission.

In conclusion, very late ST may occur even after four years and in the absence of known risk factors. Using DES requires complete understanding benefits and risks.

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