META-ANALYSIS OF TRIPLE VERSUS DOUBLE THERAPY AFTER PCI WITH STENT IMPLANTATION IN PATIENTS ON CHRONIC ORAL ANTICOAGULATION

Deng Bingqin, Nie Ruqiong, Sun yat-sen Memorial Hospital, Sun Yat-Sen University

Objectives The goal of this meta-analysis is to perform statistical analysis of published articles and trials performed in different case series to compare the benefits and risks of triple therapy (aspirin, clopidogrel and warfarin) with double therapy (aspirin and clopidogrel) after PCI-S in patients with an indication of chronic oral anticoagulation.

Methods We searched electronic and printed sources using the Medline, Embase, Cochrane Library, PubMed, Ovid sp, Elsevier science direct and different research works from different published journals in the world published before November 2011 that compare triple anti-thrombotic therapy with double antiplatelet therapy after stent implantation in patients with an indication of chronic oral anticoagulation. Studies were included if they meet the predefined inclusion criteria. Two investigators independently extracted data from published reports by use of a standardised protocol and reporting form.

Statistical analysis was performed by using RevMan 5.1.4 freeware package programme (The Cochrane Collaboration, Oxford, uk). Data were expressed as ORs and 95% 95% CI for the predetermined end points using Mantel-Haenszel method. Pooled ORs were reported with 95% CIs, and a two tailed p<0.05 was considered statistically significant for the overall treatment effect of all analysis.

Results 1. We retrieved 14 reports of studies including a total of 6 651 patients. Baseline characteristics were similar in both groups. We could compare data for 10 clinical outcomes. 1. Patients with triple therapy regimen was associated with significant reduction in stent thrombosis (OR 0.39; 95% CI 0.17 to 0.88; p=0.02) and stroke (OR 0.44; 95% CI 0.20 to 0.97; p=0.04) as compared to double therapy.

2. As compared to double therapy, triple therapy significantly increased the risk of major bleeding (OR 2.78; 95% CI 1.67 to 4.63; p<0.0001), minor bleeding (OR 1.81; 95% CI 1.30 to 2.53; p=0.0005) and GI bleeding (OR 2.96; 95% CI 1.65 to 5.32; p=0.0005).

3. The overall incidence of MACEs (OR 0.73; 95% CI 0.47 to 1.14; p=0.17), MI or rein fraction (OR 0.71; 95% CI 0.48 to 1.05; p=0.09), TVR (OR 1.00; 95% CI 0.61 to 1.64; p=0.99) and all cause death (OR 1.05; 95% CI 0.59 to 1.85; p=0.88), was comparable between the two regimens. There was, however a trend toward a higher incidence of MACEs and MI in double therapy.

4. There is no significant difference between two regimens for Net adverse cardiovascular events (NACEs) (OR 0.99; 95% CI 0.57 to 1.73; p=0.97).

Conclusions Our study suggest that triple therapy is efficacious in reducing the stent thrombosis and stroke in PCI-S patients with an indication of chronic OAC, compared with double therapy but may increase the risk of bleeding complication significantly. It also points out that triple therapy is currently the best option for the majority of patients, especially those with a higher risk thrombotic events and a lower risk of bleeding events. It is imperative that further prospective randomised controlled trials are required to define the best therapeutic strategy for patients with an indication of chronic OAC undergoing PCI-S. In the absence of meaningful randomised data, triple therapy should probably be individualised, weighing the risk of bleeding and ischaemic complication.