**DUAL ANTIPLATELET THERAPY AFTER CORONARY ARTERY BYPASS GRAFTING IN THE SETTING OF ACUTE CORONARY SYNDROME**

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*Objective:* To review available clinical data regarding Dual Antiplatelet therapy (DAPT) in post coronary artery bypass grafting (pCABG) patients.

*Background:* CABG is the best recommended intervention for post acute coronary syndrome (ACS) patients with severe multi-vessel coronary artery disease. Among the most common and worrisome complications in pCABG patients are recurrent ACS, venous graft thrombosis and death. Unlike post ACS medical management guidelines where DAPT use is a standard, no clear guidelines exist for pCABG patients. Hence we performed literature review to study pCABG DAPT use.

*Methods:* An extensive literature search was conducted using the terms aspirin, clopidogrel, DAPT and coronary artery bypass surgery. In addition, studies were discovered during bibliographic reviews. The studies with clear efficacy end points were included and divided into 2 groups:- significant positive results (sP) and neutral results (nR). A separate search for meta analyses was also performed.

*Results:* 12 clinical studies and 3 meta analyses were identified, and reviewed. Among 12 clinical studies, 5 sP and 7 nR were found(Table 1).

*Conclusion:* Although in the absence of contraindications, 9-12 months post operative DAPT use is reasonable, but no clear consensus exist for pCABG DAPT use. Hence large, multicenter, randomized clinical trials are indicated.

*Table1*

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| --- | --- | --- | --- | --- |
| **Positive Result Studies** | | **Results** | | |
| **Study** | **Outcomes** | **ASA** | **DAPT** | **p value** |
| Gurbuz et al | Recurrent angina | 23 (8.6%) | 6(1.8%) | 0.001 |
| Death | 22 (8.3%) | 7(2.2%) | 0.001 |
| Kim et al | In hospital mortality | 210(1.78%) | 31(0.95%) | 0.048 |
| Gao et al | SVG patency at 3 months | 198 (86%) | 219(92%) | 0.043 |
| Mannacio et al | Total graft occlusion | 39 (27%) | 22 (15%) | 0.02 |
| SVG occlusion | 35 (13%) | 19 (7.4%) | 0.04 |
| Sorensen et al | Recurrent MI | 25 (2.7%) | 23 (2.4%) | 0.78 |
| Death from any cause | 36 (3.8%) | 14 (1.5%) | <0.002 |
| **Negative Result Studies** | | **Results** | | |
| **Study** | **Outcomes** | **ASA** | **DAPT** | **p value** |
| Fox et al | Composite of CV death, MI, stroke | 172 (16%) | 147 (14%) | NS |
| Saw et al. | Composite of 1 year death, MI, stroke | 12% | 14% | 0.78 |
| Ibrahim et al | Graft patency flow rate by angiography | 30 (84%) | 54 (93%) | NS |
| Sanon et al | Overall survival | 3816 (89%) | 861 (88%) | 0.43 |
| Sun et al | Occluded grafts assessed by CT angiography | 11 (7.1%) | 8 (5%) | 0.43 |
| Ebrahimi et al | Graft patency rates by angiography | 1538 (85%) | 878 (86%) | 0.43 |
| Kulik et al | Mean SVG intimal area per IVUS angiography (mm2) | 4.1 + 2.0 | 4.5 +2.1 | 0.44 |
| ASA- Aspirin, SVG- Saphenous Vein Graft, CV- Cardiovascular, IVUS- Intravascular ultrasound, MI- Myocardial infarction, NS- non significant | | | | |