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META-ANALYSIS OF CLINICAL TRIALS COMPARING TRIPLE VERSUS DUAL ANTITHROMBOTIC THERAPY IN PATIENTS WITH ATRIAL FIBRILLATION AND ACUTE CORONARY SYNDROMES OR CORONARY ARTERY DISEASE REQUIRING PERCUTANEOUS INTERVENTION

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Aim To determine the optimum antithrombotic therapy for patients with atrial fibrillation (AF) and coronary artery disease (CAD) requiring percutaneous coronary intervention (PCI) and/or acute coronary syndrome (ACS) regarding the incidence of myocardial infarction or stent thrombosis. Previous meta-analyses have yielded conflicting conclusions. We have therefore performed a comprehensive literature search and performed a meta-analysis of all published RCTs to test the hypothesis that TAT significantly reduces the risk of stent thrombosis (ST) and Myocardial Infarction (MI).

Methods A literature search was done for RCTs on the efficacy of antithrombotic therapy in patients with AF and ACS or PCI.

Results A total of 11,542 patients were included in the 5 RCTs, comparing TAT vs DAT. Triple therapy did not lead to significant reduction in risk of Myocardial Infarction (MI) [risk ratio (RR) 0.85, 95% CI 0.69-1.04, $P=0.12$], [figure 1] or Stent Thrombosis (RR 0.76, 95% CI 0.51-1.12 $P=0.16$). On the other hand, the risk of major bleeding or clinically significant bleeding is significantly lower with DAT [figure 2].

Abstract 41 Figure 1 Myocardial Infarction Risk is not significantly higher with DAT in any of the 5 RCTs or the meta-analysis

Abstract 41 Figure 2 Major Bleeding or clinically significant bleeding is significantly lower with DAT

Conclusion In conclusion, DAT comprising of warfarin or DOAC and P2Y12 inhibitor reduced risk of major or clinically significant bleeding without increasing the risk of ST or recurrent MI as compared to TAT. The results encourage the use of DAT rather than TAT in patients with ACS and/or patients requiring PCI with coexistent AF who require combined antiplatelet and anticoagulant therapy.

Conflict of Interest None

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CLINICAL SIGNIFICANCE OF EARLY ECHOCARDIOGRAPHY AFTER OUT-OF-HOSPITAL CARDIAC ARREST ON ARRIVAL TO A HEART ATTACK CENTRE

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Background Left ventricular systolic dysfunction (LVSD) is common after out of hospital cardiac arrest (OOHCA) and can manifest as global or regional change. Purpose We evaluated the extent of global and regional LVSD and its association with coronary artery disease (CAD) and outcome in those undergoing coronary angiography after OOHCA.

Methods 619 patients with OOHCA were admitted at our centre between 1st May 2012 and 31st December 2017. After excluding 237 for having a non-cardiac aetiology/prior neurological disability, so 398 patients were included. Rates of cardiogenic shock and extent of CAD, as classified by the SYNTAX score were measured. The primary endpoint was 12-month mortality. Patients with incomplete data were excluded from the analysis.

Results Two hundred and sixty-six patients (median age 62 [53-71] 76.3% male) underwent both trans-thoracic echocardiography and coronary angiography on arrival and were included in the final analysis. 81.6% had ventricular fibrillation, 83.5% were witnessed and 51.9% occurred at residence. Ninety-six patients (36%) had significant LVSD (Left Ventricular Ejection Fraction [LVEF] $<40\%$) and 139 (52.2%) patients had regional wall motion abnormalities (RWMA) on arrival. Patients were classified into 4 groups (Group A: LVEF $<40\%$ /Global, Group B: LVEF $<40\%$ /RWMA, Group C: LVEF $\geq 40\%$ /Global and Group D: LVEF $\geq 40\%$ /RWMA) with frequencies of 10.9%, 25.2%, 41.4% and 22.6%. Patients in Group D had the shortest low-flow times and lowest rates of epinephrine administration, with most favourable metabolic status on arrival, based on lactate and creatinine values. In Groups B and D (RWMA), patients were significantly more likely to

Abstract 42 Figure 1

have a post-ROSC ECG demonstrating ST elevation/LBBB and absence of epinephrine administration during resuscitation with shorter low flow times. Extent of CAD was similar between the four groups. From patients with LVEF $\geq$ 40%, patients in Group C had substantially lower SYNTAX scores than compared with Group D (0.5 vs 13.5, $p<0.001$). However, both Group B and C (RWMA) groups had highest rates of culprit lesions compared with matched global groups which was reflected in higher PCI rates (figure 2 and table 3). The primary endpoint of 12-month mortality was lowest in Group D and highest in the Group A group. A similar effect was observed for poor neurological outcome and 30-day mortality. Patients with regional LVSD had significantly improved survival at 12 months compared with those with global LVSD (70.5% vs 48.3%, $p<0.001$) vs 51). Those in Group D had

Abstract 42 Figure 2

Abstract 42 Table 1 Baseline Characteristics by Presence of RWMAs and Initial LV Systolic Function

	LVEF < 40%			LVEF $\geq$ 40%		
	RWMAs N = 29	No RWMAs N=67	P value	RWMAs N = 110	No RWMAs N=60	P value
	3	4		1	2	
Age	61 (54-66)	67 (59-75)	0.009	60 (51-69)	62 (48-70)	0.982
Male (%)	25 (86.2%)	53 (79.1%)	0.413	87 (79.1%)	38 (63.3%)	0.026
Witnessed	23 (79.3%)	58 (86.6%)	0.369	91 (82.7%)	50 (83.3%)	0.920
Residence	17 (58.6%)	35 (52.2%)	0.564	53 (48.2%)	33 (55.0%)	0.395
Location						
Bystander	20 (69.0%)	48 (71.6%)	0.791	85 (77.3%)	48 (80.1%)	0.680
CPR						
Low Flow	25.5 (11.5-36.25)	28 (17.5-40)	0.238	19 (9-28)	25 (17.5-33.5)	0.008
VF/VT	22 (75.9%)	54 (80.6%)	0.600	93 (84.5%)	47 (78.3%)	0.310
Epinephrine use	17 (58.6%)	57 (85.1%)	0.005	55 (50.9%)	40 (66.7%)	0.049
pH	7.24 (7.17-7.32)	7.21 (7.05-7.29)	0.553	7.28 (7.20-7.35)	7.22 (7.1-7.32)	0.017
Lactate	4.6 (2.7-6.6)	4.8 (2.5-9.3)	0.828	3.1 (1.7-5.8)	4.8 (2.3-7.4)	0.031

HTN, hypertension; CPR, cardiopulmonary resuscitation; VF/VT, ventricular fibrillation/ventricular tachycardia

Abstract 42 Table 2 Admission and Outcome Metrics by Presence of Regional Wall Motion Abnormalities (RWMAs) and LV Systolic Function on Initial Transthoracic Echocardiography

	LVEF < 40%			LVEF $\geq$ 40%		
	RWMAs N=29	No RWMAs N= 67	P Value	RWMAs N=110	No RWMAs N=60	P Value
ST Elevation/LBBB	26 (89.7%)	47 (70.1%)	0.039	83 (75.5%)	25 (41.7%)	<0.001
LVEF (median, IQR)	30 (30-35)	30 (30-30)	0.002	45 (40-50)	55 (45-55)	<0.001
Culprit lesion	25 (86.2%)	32 (47.8%)	<0.001	91 (82.7%)	26 (43.3%)	<0.001
PCI	25 (86.2%)	28 (41.8%)	<0.001	88 (80%)	25 (41.7%)	<0.001
SYNTAX score	19 (9-26.5)	15.5 (0-28)	0.332	13.5 (7-21.5)	0.5 (0-12)	<0.001
SCAI C-E	18 (62.1%)	44 (66.7%)	0.665	35 (32.4%)	23 (38.3%)	0.439
12 month mortality	14 (48.3%)	39 (58.2%)	0.369	27 (24.5%)	27 (45%)	0.006
30 day mortality	14 (48.3%)	37 (55.2%)	0.531	25 (22.7%)	26 (43.3%)	0.005
Cardiac Death	5/14 (35.7%)	10/41 (24.4%)	0.411	1/29 (3.4%)	2/28 (7.1%)	0.532
Poor Neurological Outcome	14 (48.3%)	46 (68.7%)	0.058	37 (33.6%)	31 (51.7%)	0.022

highest survival at 12 months, while this was similar for Groups B and C and lowest in Group A (figure 1). Cardiac aetiology death was significantly higher in those with LVEF<40% compared to those with LVEF $\geq$ 40% (70.5% vs 48.3%, $p<0.001$).

Conclusions Patients with significant LVEF <40% have higher rates of cardiogenic shock and mortality which was driven by cardiac aetiology death, while presence of RWMAs are associated with a higher rate of culprit coronary lesions and improved outcome

Conflict of Interest None

43 ST-ELEVATION MYOCARDIAL INFARCTION IN SUB-SAHARAN AFRICA: THE NEED FOR BETTER DATA

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Introduction There is growing evidence that cardiovascular disease (CVD) prevalence is increasing in Sub-Saharan Africa (SSA) (1). Historically the prevalence of MI in SSA has been thought to be low (2). However, this may be changing as parts of SSA undergo urbanization, and the rates of CVD increase(1), there is a growing awareness of the need to have health systems in place that can manage a time-sensitive cardiovascular emergency like STEMI. The acute management of STEMI presents significant challenges to health systems in SSA. A systematic review was conducted to explore the