

EA - Emo Affiliates

Dual Antiplatelet Therapy Following Percutaneous Coronary Intervention in Patients on Chronic Oral Anticoagulation

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Background I

- **ASA and thienopyridine as the optimal antiplatelet therapy for the prevention of stent thrombosis following PCI with stent implantation**
- **Optimal antithrombotic strategy for patients in whom long-term anticoagulation (AC) with warfarin is recommended is unclear.**



Background II

- The risk of bleeding in patients already on AC is increased with the addition of dual antiplatelet therapy, while withholding antiplatelet therapy augments the risk of stent thrombosis.
- Temporary discontinuation of AC is associated with a higher risk of thromboembolism and current liberal use of drug-eluting stents (DES) may increase the overall risk of stent thrombosis.

Study population

All consecutive patients who underwent PCI in San Raffaele Hospital and Emo Centro Cuore Columbus, Milan, Italy, and were successively discharged on a triple therapy with aspirin and thienopyridines (ticlopidine or clopidogrel) and oral anticoagulant (warfarin)

Baseline clinical characteristics I



	DES n=71	BMS n=56	p
Age, years	68.8±8.6	70.2±7.6	0.61
Male gender, n (%)	61 (85.9)	49 (87.5)	1.0
Hypertension, n (%)	50 (70.4)	35 (62.5)	0.45
Diabetes, n (%)	16 (22.5)	14 (25)	0.83
Hyperlipidemia, n (%)	38 (53.5)	21 (37.5)	0.05
Current smoker, n (%)	6 (8.5)	2 (3.6)	0.46
Family history of CAD, n (%)	23 (32.4)	22 (39.3)	0.46

Baseline clinical characteristics II

	DES n=71	BMS n=56	p
Previous MI, n (%)	38 (53.5)	30 (53.6)	1.0
Previous PCI, n (%)	28 (39.4)	20 (35.7)	0.71
Previous CABG, n (%)	23 (32.4)	16 (28.6)	0.70
LVEF, %	44.6±12.7	47.4±15.5	0.24
Stable angina, n (%)	34 (47.9)	26 (46.4)	0.04
Unstable angina, n (%)	11 (15.5)	18 (32.1)	0.04
STEMI, n (%)	1 (1.4)	3 (5.4)	0.32
CHADS2 risk score for AF	1.96±1.21	1.59±1.21	0.32

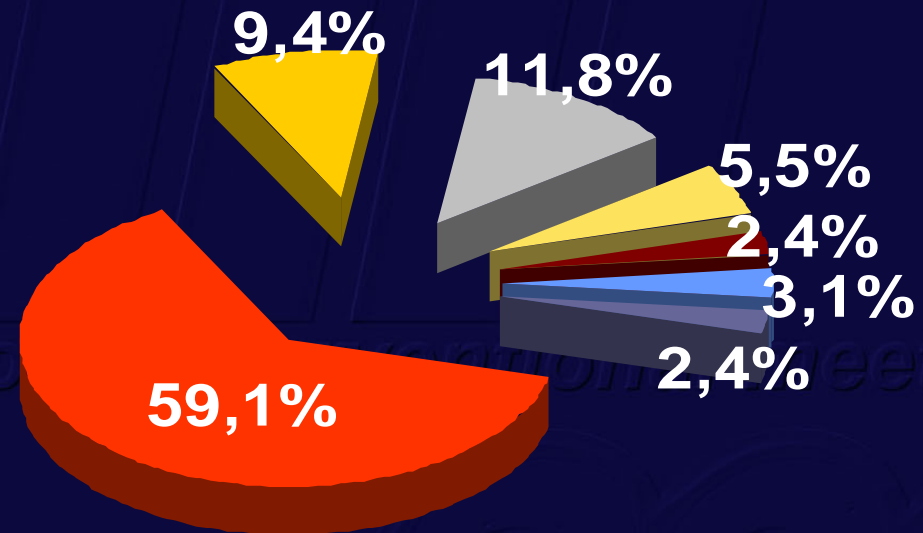
Procedural characteristics

	DES	BMS	p
Nr patients treated	71 (55.9)	56 (44.1)	
Total stent length, mm	27.7±11.9	21.9±10.4	p<0.001
Nr stents/lesion	1.2±0.4	0.9±0.6	p<0.001
Max diam, mm;	3.00±0.45	3.24±0.71	p<0.001
Max pressure, atm;	17±4	14±4	p=0.30



Procedural characteristics

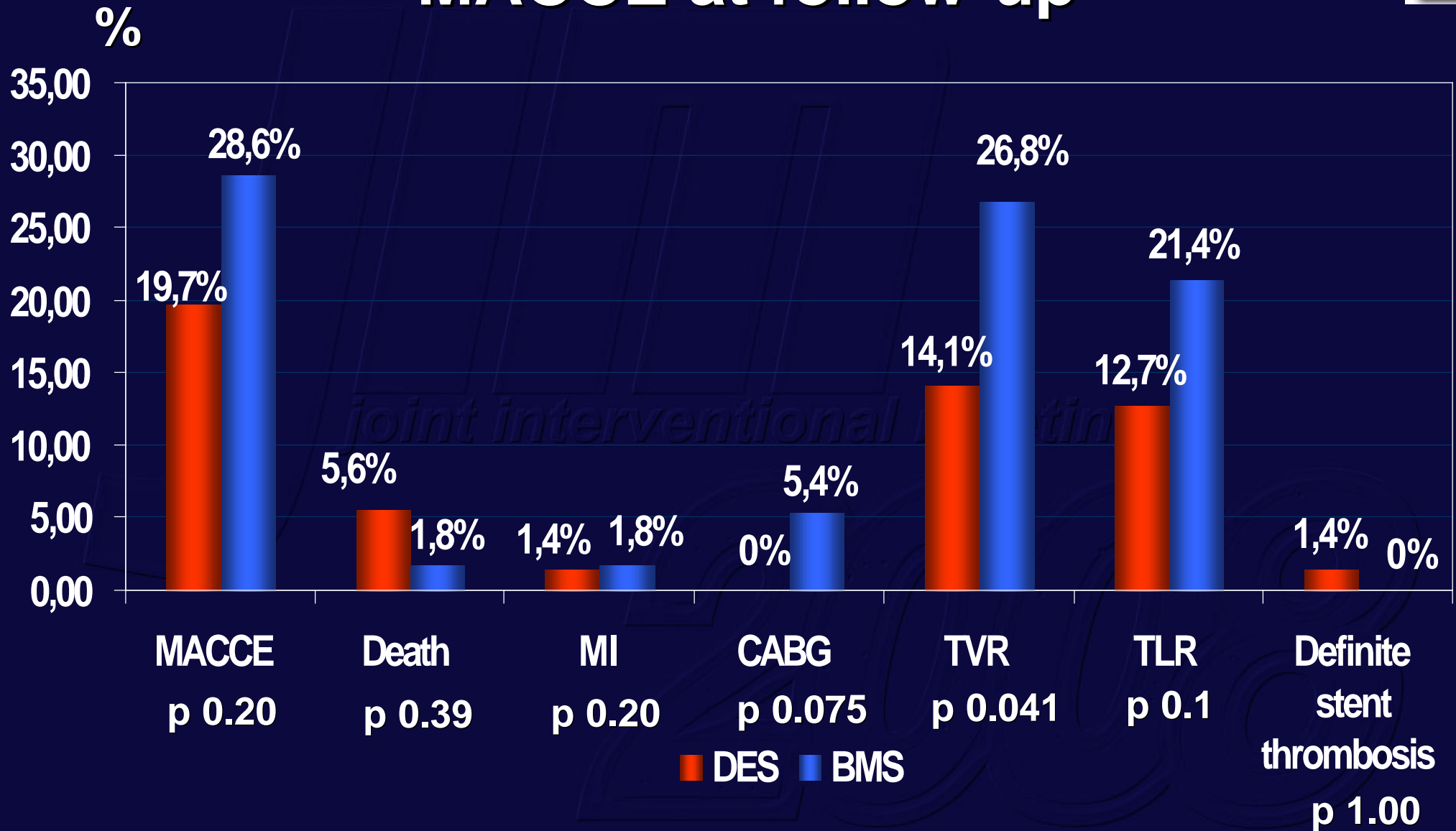
Indications for chronic anticoagulation therapy



- AF
- LV thrombus
- Prosthetic Valve
- Pulmonary embolism
- DVT
- Coronary aneurysm
- Other



MACCE at follow-up



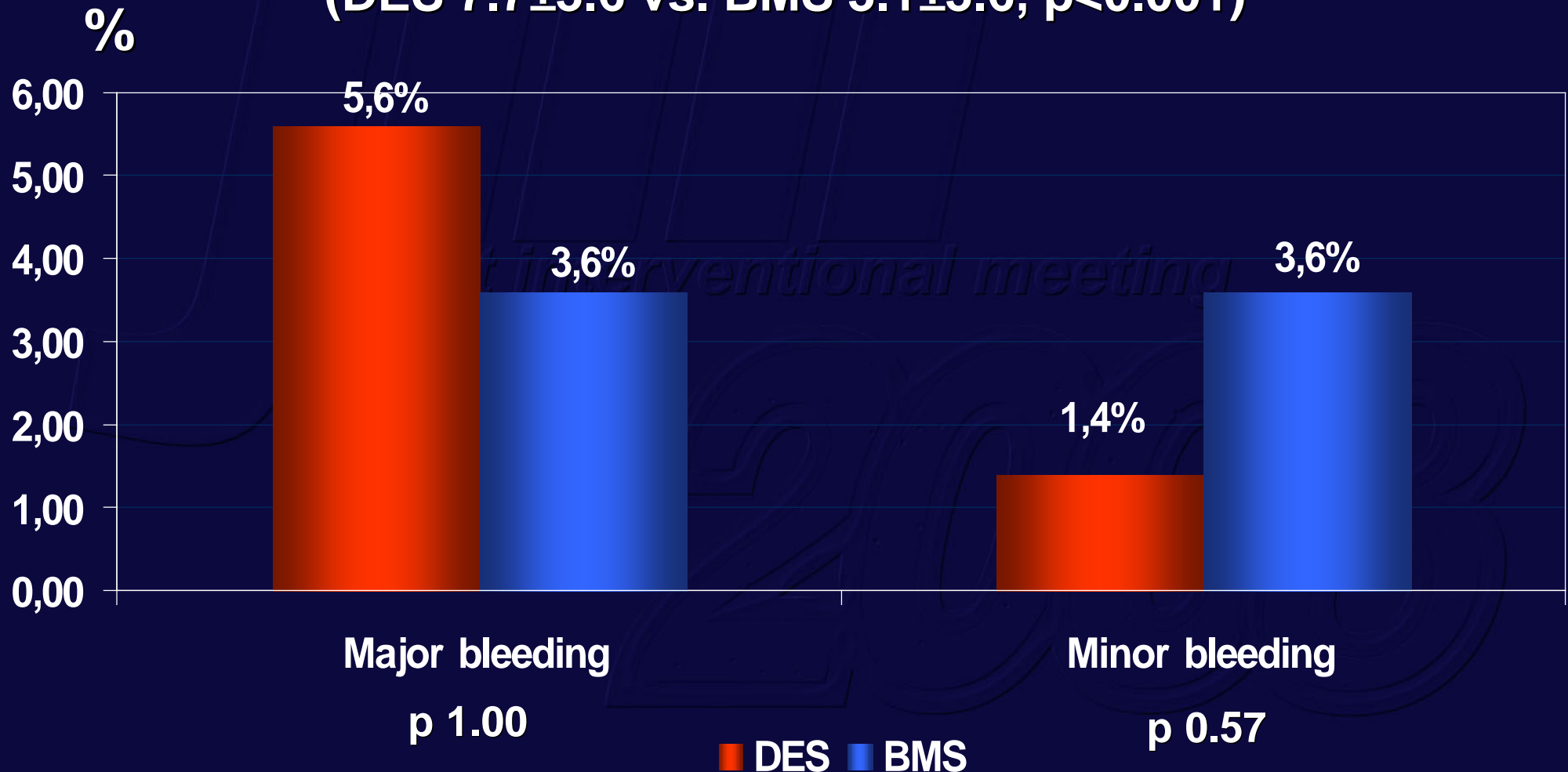


MACCE at follow-up

FU length: 21.0±18.9 mo

Triple therapy length: 5.6±4.6 mo

(DES 7.7±3.6 vs. BMS 3.1±3.6, p<0.001)





Major bleeding complications 1

Pt	Age yr	Reason warfarin	Stent	CHADS 2	Time to event mo	Event description
1	66	Coronary aneurysm	BMS	NA	2	Cerebral hemorrhage & death
2	74	AF	SES	1	0.5	Cerebral hemorrhage & death
3	57	AF	PES	5	3	Subarachnoid hemorrhage & neuro deficits.



Major bleeding complications 2

Pt	Age yr	Reason warfarin	Stent	CHADS 2	Time to event mo	Event description
4	73	AF	ASA and warfarin interrupted complicated by definite stent thrombosis			Subarachnoid hematoma & death
5	75	Pulm. embolism				Diverticular hemorrhage
6	66	AF	PES	4	1	Severe GI hemorrhage

Conclusions

- **Overall bleeding rate in patients on long-term AC and dual antiplatelet therapy following PCI is 7.1% with a 4.7% incidence of major bleeding.**
- **50% of the major bleeding complications were fatal, 67% within the first month from the index procedure.**

Conclusions

- **The optimal strategy for treating patients undergoing PCI with stent implantation and requiring long-term AC is still unclear and will depend on individual patient's risk factors for thromboembolism and bleeding.**
- **Alternative stent types, requiring short-term antiplatelet therapy or shortened antiaggregation period after BMS implantation, should be taken under consideration in these pts.**