

Retrospektive Real-World Study Yukon^{DES} vs. Taxus

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Original Title:

Comparison of a Polymer-Free Rapamycin-Eluting Stent (YUKON) With a Polymer-Based Paclitaxel-Eluting Stent (TAXUS) in Real-World Coronary Artery Lesions

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STUDY DESIGN:

A retrospective study designed to test the non-inferiority of the polymer-free rapamycin-eluting YUKON^{DES} stent with the polymer-based paclitaxel-eluting TAXUS stent in unselected real-world patients. A total of 410 unselected patients with de novo coronary artery stenosis received the polymer-free rapamycin-eluting YUKON^{DES} stent coated with 2% rapamycin solution (Group A, n = 205) or polymer-based paclitaxel-eluting Taxus stent (Group B, n = 205). Patients with stable angina pectoris as well as patients with Acute Coronary Syndromes (unstable angina, NSTEMI, STEMI) were included. All coronary lesions suitable for stenting including bypass grafts as well as left main trunk stenosis were included.

Baseline demographic and clinical characteristics of study patients

	YUKON (Group A)	TAXUS (Group B)	P
Number of patients, n	205	205	
Age, y	66,9 ± 10,7	66,4 ± 11	0,60
Men, %	76,7	70,8	0,18
Risk factors			
Hypertension, %	87,4	80,0	0,05
Hyperlipidaemia, %	70,8	60,0	0,02
Diabetes, %	33,2	31,2	0,67
Smoking, %	21,4	20,0	0,70
Previous MI, %	26,4	23,4	0,50
Prior CABG, %	24,0	23,4	0,90
Previous PCI, %	58,4	49,8	0,07
Ejection fraction, %			0,29
>50 %	85,4	81,4	
30-50 %	12,2	16,0	
<30 %	2,4	2,4	
Clinical presentation of CAD			0,35
Stable angina, %	57,0	63,0	
Unstable angina, %	30,2	23,4	
NSTEMI, %	8,8	7,8	
STEMI, %	3,8	5,8	

Baseline angiographic characteristics

	YUKON n=205	TAXUS n=205	P
Lesion location, %			0,48
LAD	39,0	34,2	
LCX	21,0	25,8	
RCA	33,2	29,8	
Left main	2,4	4,0	
SVG	4,4	6,4	



Baseline quantitative coronary angiography

	YUKON n = 205	TAXUS n = 205	P
Reference diameter, mm	2,75 ± 0,47	2,80 ± 0,46	0,11
Minimal lumen diameter, mm			
Pre	0,76 ± 0,38	0,76 ± 0,41	0,80
post	2,40 ± 0,40	2,46 ± 0,40	0,10
Diameter stenosis, %			
Pre	72,5 ± 12,8	72,8 ± 13,5	0,80
Post	13,6 ± 8,9	13,6 ± 6,9	0,90
Length of stenotic segment, mm	10,3 ± 6,0	10,7 ± 5,3	0,50
Stent length, mm	22,97 ± 13,0	23,63 ± 10,0	0,56
Stent size, mm	2,96 ± 0,38	3,05 ± 0,42	0,20
Stents per lesion, n	1,35 ± 0,73	1,30 ± 0,58	0,50

STUDY ENDPOINTS:

The primary endpoints of the study were major cardiac events (MACE) at 30 days and at 6 months after stenting. Secondary endpoints were deaths of all causes except of cardiac deaths (noncardiac deaths).

RESULTS:

MACE and noncardiac deaths in 30 days

	YUKON	TAXUS	P
Data available, n (%)	202 (98,6)	204 (99,6)	
MACE total (0-30 days)	5 (2,4)	4 (2,0)	0,9
MI	0	1 (0,5)	0,30
Cardiac death	0	0	-
TVR	0	0	-
NonTVR	5 (2,4)	2 (1,0)	0,25
CABG	0	0	-
Stent thrombosis	0	1 (0,5)	0,30
Non cardiac deaths	1 (0,5)	0	0,30

MACE and noncardiac deaths in 30 days to 6 months

	YUKON	TAXUS	P
Data available, n (%)	201 (98,0)	202 (98,6)	
MACE total (30 days to 6 months)	45 (22,0)	29 (14,2)	0,13
MI	0	0	-
Cardiac death	0	0	-
TLR	15 (7,3)	7 (3,4)	0,15
TVR	4 (2,0)	5 (2,4)	0,70
NonTVR	22 (10,7)	16 (7,8)	0,30
CABG for TL	2 (1,0)	1 (0,5)	0,99
Stent thrombosis	0	0	-
Non cardiac deaths	1 (0,5)	1 (0,5)	0,99

CONCLUSION:

With respect to the differences between two cohort groups: the higher rate of hypertension (87,4%), hyperlipidemia (70,8%) and previous PCI (58,4%) in the YUKON^{DES} stent group in comparison with the rate of hypertension (80%, P= 0,05), hyperlipidemia (60%, P=0,02) and previous PCI (49,8%, P=0,07) in the TAXUS stent group, up to 6 months after PCI of real world coronary lesions, there were **no statistically significant differences** in MACE between patients treated with the YUKON^{DES} stent and the TAXUS stent.