

Metabolic syndrome and mortality prediction in the seven countries' study: single or multifactorial

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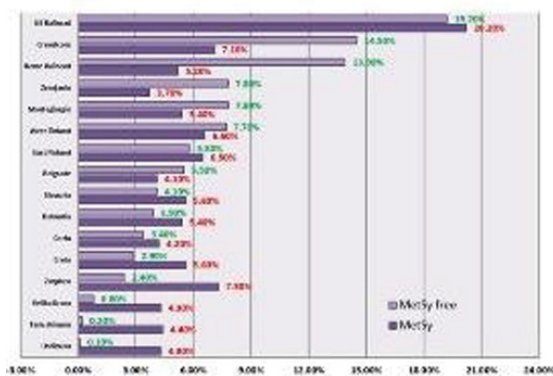
Introduction: The metabolic syndrome (Met Sy) is a known cluster of risk factors (HTA, HLP, DM, BMI) that promotes overall vascular disease, however its real impact on overall, ischemic heart disease (IHD) and cerebrovascular disease (CVD) mortality remains debated.

Material and methods: The Seven Countries Study encompassed 12,763 participants who were healthy men over 40y at baseline and who underwent regular check ups every 5 years throughout over a 4 decades' span. Morbidity and mortality was adjudicated according to valid ICD and LPH coding.

Results: Using the IDF definition of the Metabolic Syndrome, 9,09% of participants were identified. In a multivariate analysis predictors for overall Mt were hypertension (p<0.0001) and BMI (p<0.029), while HLP had a weak prediction value (p=0.083), where as MetSy and DM had not at all. Hypertension (p<0.0001) remained a strong predictor for IHD mortality to-

gether with HLP (p<0.0001), while diabetes was of weak predictive value (p=0.065), whereas MetSy failed to. Although HTA was a strong predictor for CVD mortality, so did MetSy (p<0.050), while DM and HLP haven't while BMI had a low impact (p=0.070).

Conclusion: Metabolic syndrome's role in atherosclerotic burden remains important, however whether its power is due to its respective components or their interactions remains to be an issue. The described results belong to an era where both IHD and CVD were considered a "male disease" women were spared of, so, further validation in the described cohorts is needed in an offspring fashion, however hypertension remains the driving force of both overall mortality as well as specific IHD and CVD ones, also previously demonstrated in the very same cohort to be more important in the setting of maternal family history of hypertension, than paternal one.



MetSy in the SCS

Overall mortality		Variables in the Equation					95% C.I. for EXP(B)		
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper	
S	MetSy	-.172	0.155	1.089	1	0.297	0.842	0.609	1.163
T	DM	-.141	0.139	1.023	1	0.312	0.869	0.651	1.141
P	HTA	-.272	0.051	15.778	1	0.000	0.762	0.676	0.859
D	HLP	-.088	0.050	3.008	1	0.083	0.916	0.830	1.011
Z	BMI	0.322	0.147	4.755	1	0.029	1.379	1.033	1.842
Y	Constant	1.328	0.146	82.907	1	0.000	3.772		

a. Variable(s) entered on step 1: MetSy, DM, HTA, HLP, BMI

IHD mortality		Variables in the Equation					95% C.I. for EXP(B)		
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper	
S	MetSy	-.032	.239	.018	1	.893	1.033	.547	1.949
T	DM	-.105	.166	3.394	1	.065	.737	.532	1.020
P	HTA	-.618	.090	46.774	1	.000	.539	.452	.644
D	HLP	-.678	.076	134.450	1	.000	.416	.358	.482
Z	BMI	.093	.221	.178	1	.673	1.098	.712	1.692
Y	Constant	.534	.174	9.683	1	.005	1.707		

a. Variable(s) entered on step 1: MetSy, DM, HTA, CVD, BMI Variable(s) entered on step 1: MetSy, DM, HTA, HLP, BMI

CVD mortality		Variables in the Equation					95% C.I. for EXP(B)		
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper	
S	MetSy	-.550	.284	3.744	1	.050	.577	.330	1.007
T	DM	-.198	.204	.939	1	.332	.821	.590	1.124
P	HTA	-.743	.114	42.526	1	.000	.475	.380	.595
D	HLP	.101	.078	1.665	1	.197	1.106	.949	1.289
Z	BMI	.075	.202	1.373	1	.240	1.079	.761	1.488
Y	Constant	-.412	.211	3.806	1	.050	.662		

a. Variable(s) entered on step 1: MetSy, DM, HTA, CVD, BMI