(TIPS)-3: A Polypill For Primary Prevention Of Cardiovascular Disease In Intermediate Risk People: Results of the International Polycap Study

Purpose: Evaluate the effectiveness of a fixed dose polypill containing a beta-blocker, ACE-inhibitor, diuretic and statin compared to placebo on primary prevention of CV events in a population with intermediate CVD risk.

Trial Design: N = 5713 randomized, men over 50 years and women over 55 with IHRS 10 or over, or men and women over 65 years with IHRS 5 or over; 84% had hypertension and 37% elevated blood glucose at baseline, mean follow up 4.6 years. 2x2x2 factorial RCT design. Polycap: atenolol 100 mg daily, ramipril 10 mg daily, hydrochlorothiazide 25 mg/daily, simvastatin 40 mg/daily vs. placebo.

Primary Endpoint: First occurrence of the composite of: CV death, non–fatal MI, non-fatal stroke, heart failure, resuscitated cardiac arrest or arterial revascularization.

Clinical Outcomes	Polypill (N = 2861) N (%)	Placebo (N = 2852) N (%)	Hazard Ratio (95%CI)	P value
Primary outcome	126 (4.4)	157 (5.5)	0.79 (0.63-1.00)	0.05
CV death	84 (2.9)	101 (3.5)	0.82	
MI	17 (0.6)	26 (0.9)	0.66	
Stroke	26 (0.9)	36 (1.3)	0.71	
HF	12 (0.4)	10 (0.4)	1.19	
Cardiac arrest	1 (0)	0 (0)	-	
Arterial Revascularization	12 (0.4)	25 (0.9)	0.48	
Angina	17 (0.6)	22 (0.8)	0.77	

Results:
- Polypill treatment resulted in a 21% reduction in primary CV outcome.
- SBP reduced by 5.8 mmHg over follow up.
- LDL-D reduced by 19 mg/dL over follow up.