



Società Italiana dell'Ipertensione Arteriosa
Lega Italiana contro l'Ipertensione Arteriosa

EVENTO FORMATIVO INTERREGIONALE SIIA
PIEMONTE | LIGURIA | VALLE D'AOSTA

Torino, 12 ottobre 2024

Ipertensione da abuso di sostanze

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Caso Clinico

- Uomo, 44 anni
- Familiarità per ipertensione arteriosa
- Consumo di sostanze stupefacenti (cannabis il giorno precedente, cocaina due giorni prima), fumatore attivo
- Non ha patologie note, non assume farmaci in cronico
- Accede in Pronto Soccorso per riscontro al domicilio di **PAO 215/130** associata a **parestesie emisoma sinistro e dolore dorsale sinistro**

Caso Clinico

- Esame obiettivo: sovrappeso (BMI 28)
- Ematochimici: Tn HS 140 ng/L, ipercolesterolemia
- ECG: RS, segni di ipertrofia VS
- TC encefalo e angio-TC torace e addome: ndr

Escluse cause di ipertensione secondaria:

- TSH, PRA/aldosterone, cortisolo basale + urinario 24h + salivare: tutti nei limiti
- Metanefrine urinarie aumentate ma al follow-up progressiva normalizzazione
- Ecodoppler arterie renali: non stenosi

Caso Clinico

	24/11/22	28/3/22	6/6/22	23/9/22
Dopamina U (<2662)	4021	2772	2852	2876
Noradrenalina U (<470)	720	413	314	311
Adrenalina U (<110)	64	67	41	58
Metossitironina U (<3946)	*	*	*	*
Normetanefrina U (<424)	1277	543	429	625
Metanefrina U (<240)	412	290	299	293

Caso Clinico

Valutazione del danno d'organo:

- Ecocardiogramma: ipertrofia concentrica Vsin (196 g/m²)
- Esame urine: albuminuria (210 mg /24h)
- Ecodoppler tronchi sovra-aortici: aumento IMT (1 mm)
- Fundus oculi: assenti incroci A-V

Caso Clinico

Diagnosi: Ipertensione arteriosa di grado 3

Terapia:

in acuto:

nitrito ev + urapidil + benzodiazepina

in cronico:

amlodipina 10 mg + ramipril/idroclorotiazide 5/25
mg + nebivololo 5 mg + doxazosina 4 mg

SOSTANZE
STUPEFACENTI *che*
causano
ipertensione
arteriosa

- Cocaina
- Metanfetamine
- MDMA (Ecstasy)
- Fenciclidina (PCP)
- Nuove sostanze psicoattive (mefedrone, cannabinoidi sintetici)

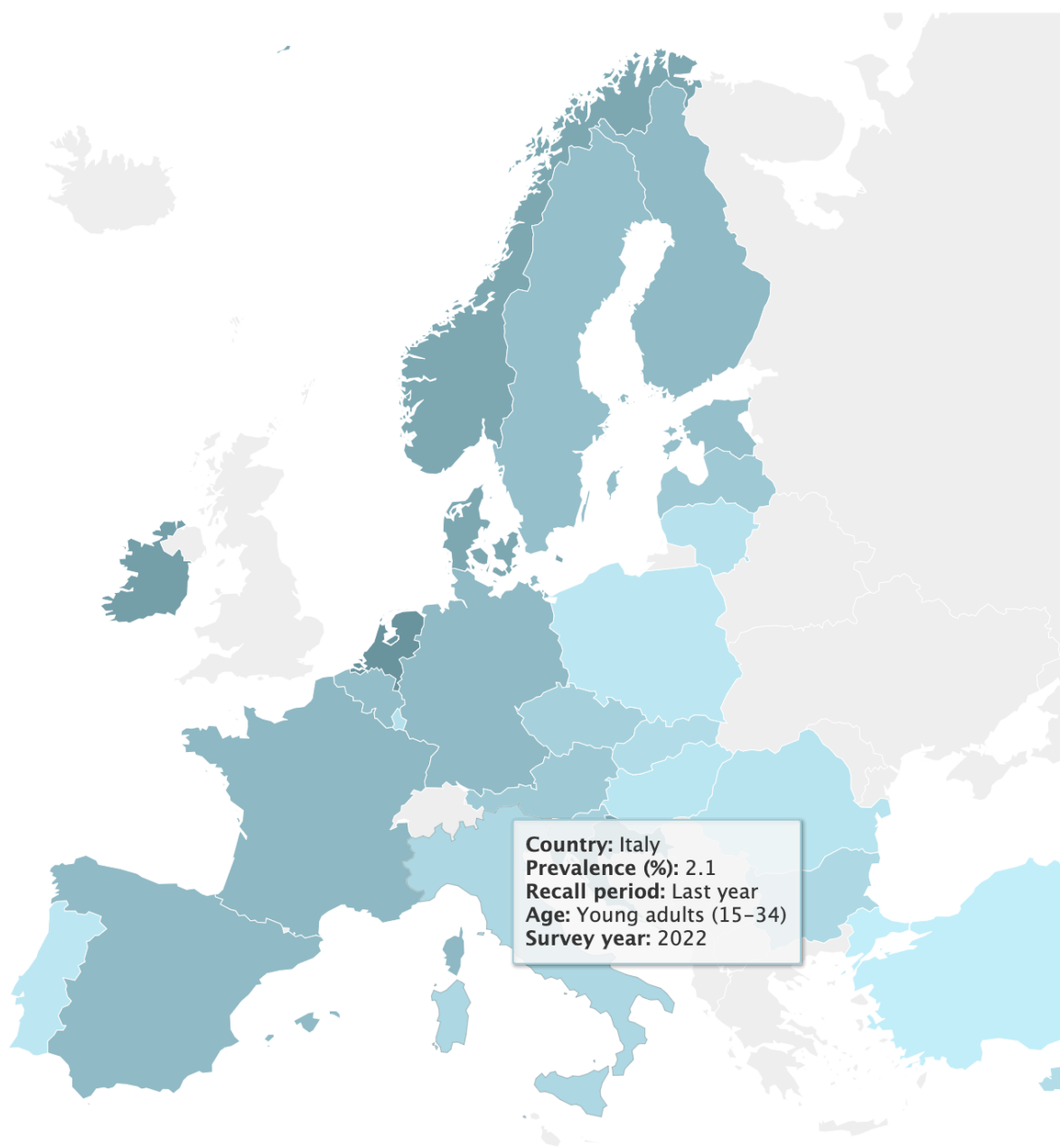
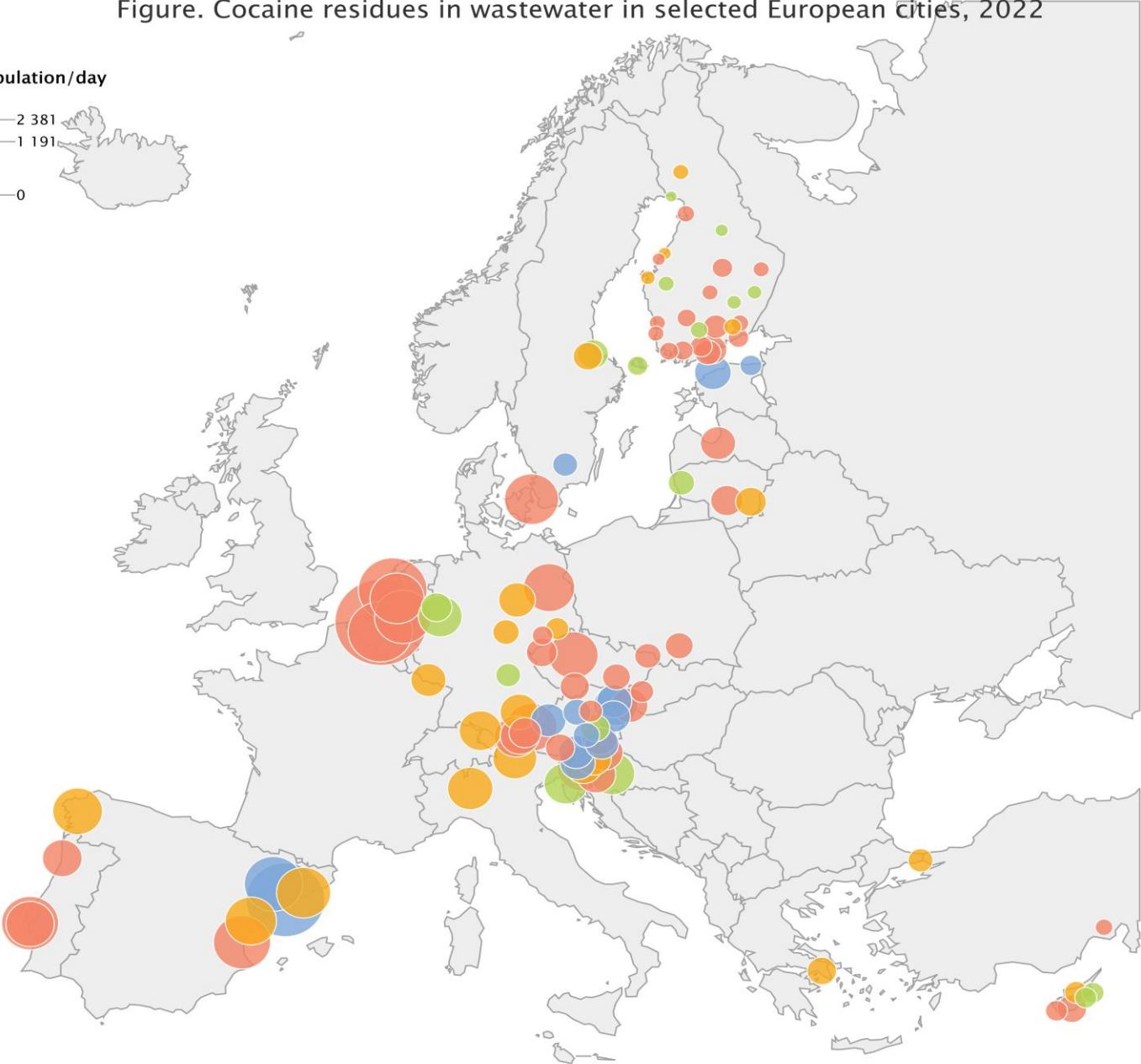
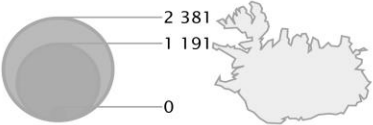


Figure. Cocaine residues in wastewater in selected European cities, 2022

mg/1000 population/day



Cocaine Addiction Signs



Teeth grinding



Dry mouth



Dilated pupils



Nosebleeds



Rapid speech



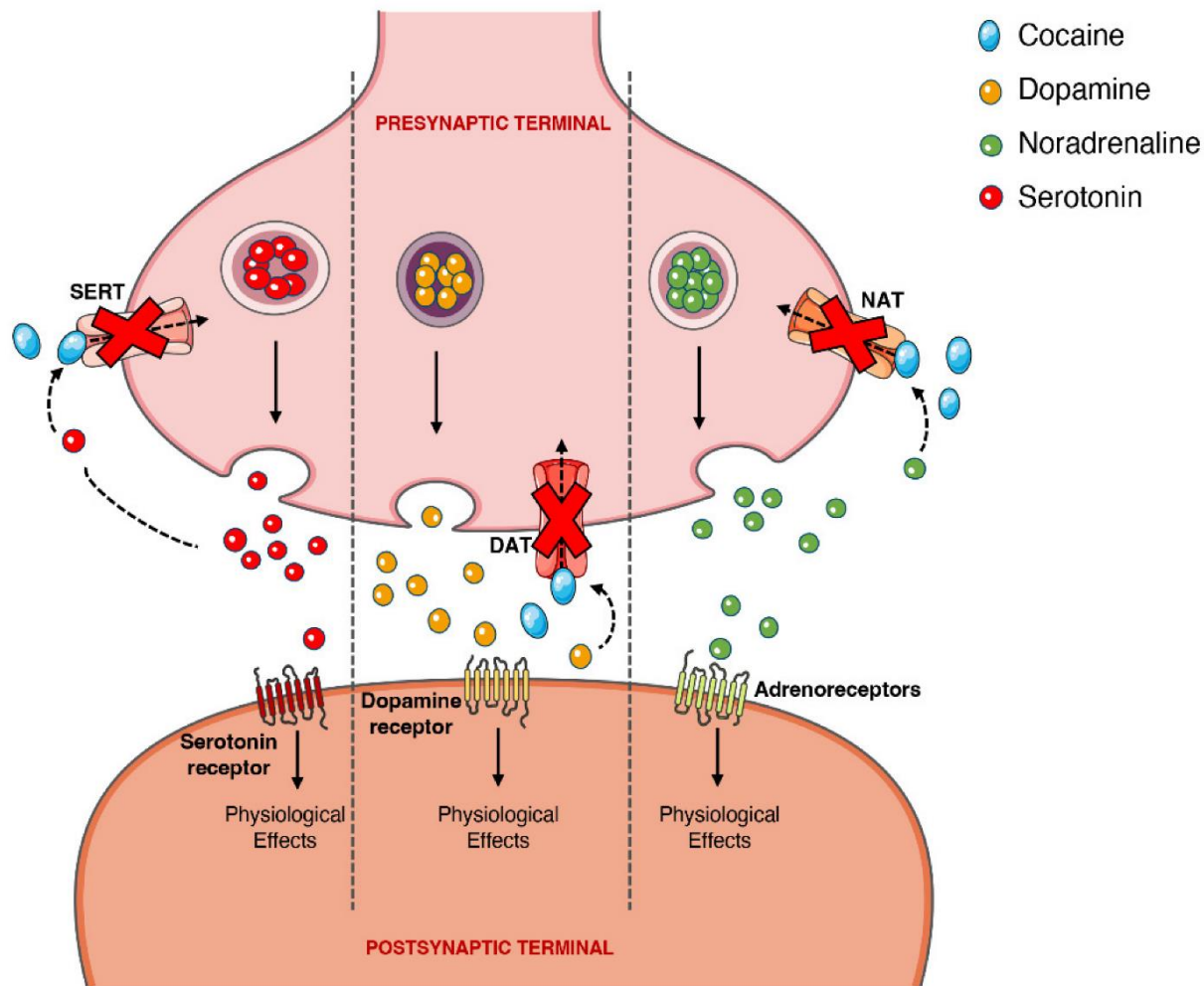
Weight loss



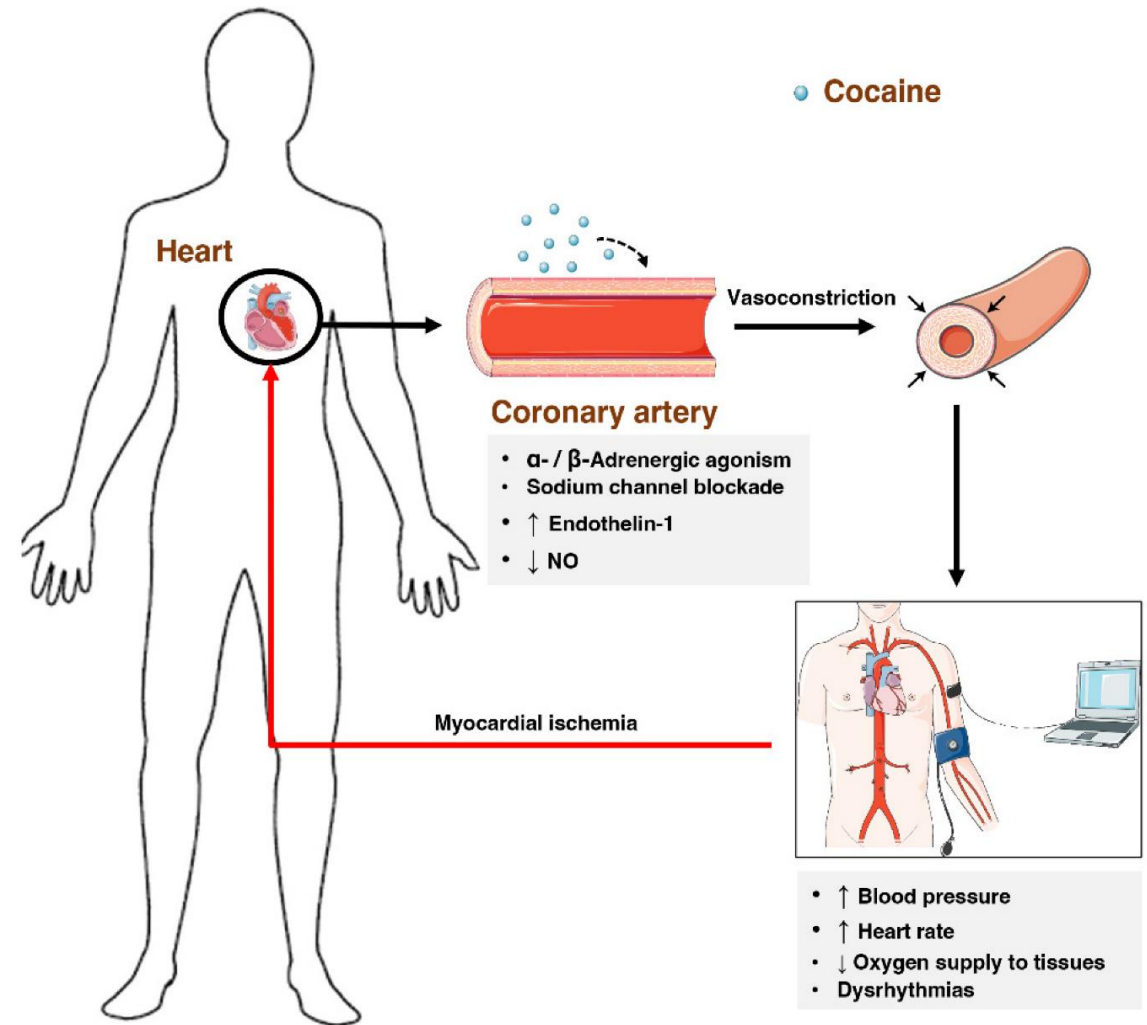
Erratic sleep schedule



Financial issues



Roque Bravo R, Faria AC, Brito-da-Costa AM, et al. Cocaine: An Updated Overview on Chemistry, Detection, Biokinetics, and Pharmacotoxicological Aspects including Abuse Pattern. *Toxins (Basel)*. 2022;14(4):278. 2022 Apr 13. doi:10.3390



Lifetime Cocaine Use and Cardiovascular Characteristics among Young Adults: The CARDIA Study

Effects of cocaine on the heart

Arrhythmias

Inhibition of sodium channels: Increased heart rate and acidity

Inhibition of potassium channels: Prolongation of QT interval, early afterdepolarization, and ventricular tachyarrhythmia

Acute myocardial infarction (MI)

(Low dose)

Increased heart rate, blood pressure, and myocardial contractibility

Coronary spasm/vasoconstriction and platelet adherence/thrombosis

Increased myocardial oxygen demand and decreased myocardial oxygen supply: Imbalance between oxygen supply and demand

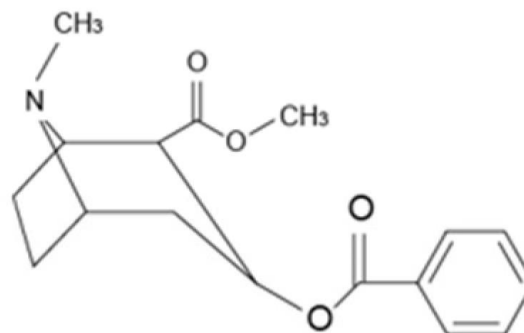
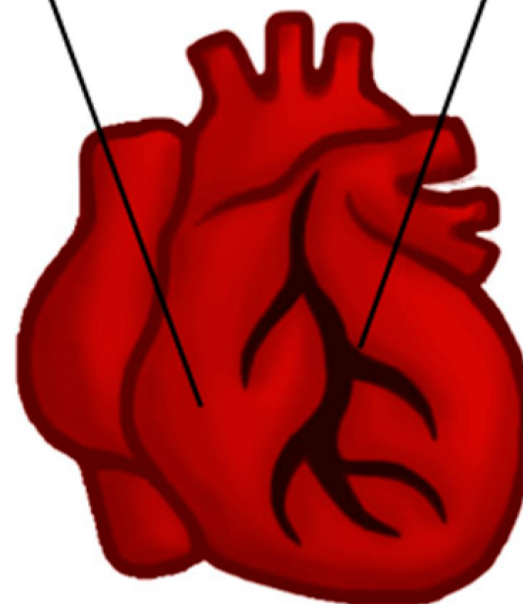
(High dose)

Blockage of sodium transport and norepinephrine uptake in the myocardium: Decreased left ventricular contractibility and prolongation of QRS and QT intervals

Vessel damages/ruptures and thrombosis

Cardiomyopathy

- Non ischemic myocardial depression: Dilated cardiomyopathy due to deprived myocardial oxygen supply
- Left ventricular hypertrophy



Cocaine (C₁₇H₂₁NO₄)

Effects of cocaine on blood vessels

Acute hypertension and coronary spasm

Inhibition of norepinephrine reuptake

Increased vasoconstriction

by increased endothelin-1, impaired vasorelaxation, inhibited NO synthase, impaired intracellular calcium handling, and inhibited sodium/potassium channels

Platelet aggregation/blood clots

Atherosclerosis

Impaired NO release

Increased levels of cell adhesion molecules, low-density lipoprotein migration, leukocyte migration, and intimal smooth muscle cells within the coronary artery wall

Coronary artery disease

- Vasoconstriction of coronary artery and vasospasm by stimulating adrenergic receptor
- Promoted intracoronary thrombosis
- Accelerated atherosclerosis

Benzodiazepine

Nitrato ev / Nitroprussiato

Calcio-antagonisti

Beta-Bloccanti *hanno ruolo controverso in acuto!*

*Gestione
Ipertensione
acuta da Cocaina*

Lo et al Meta-Analysis of Beta-Blocker Use in the Setting of Acute Cocaine-Induced Chest Pain

507

Myocardial Infarction

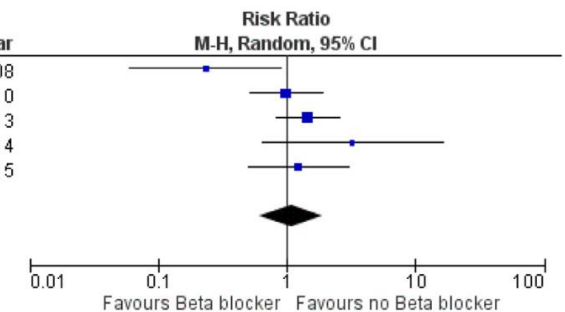
Study or Subgroup	Beta blocker		No Beta blocker		Weight	Risk Ratio M-H, Random, 95% CI	Year
	Events	Total	Events	Total			
Dattilo 2008	2	33	72	277	12.5%	0.23 [0.06, 0.91]	2008
Rangel 2010	15	151	18	177	27.5%	0.98 [0.51, 1.87]	2010
Ibrahim 2013	22	162	20	213	29.9%	1.45 [0.82, 2.56]	2013
Fanari 2014	5	164	2	212	9.6%	3.23 [0.64, 16.45]	2014
Schmidt 2015	7	26	7	32	20.5%	1.23 [0.49, 3.06]	2015

Total (95% CI) 536 911 100.0% **1.08 [0.61, 1.91]**

Total events 51 119

Heterogeneity: $\tau^2 = 0.20$; $\chi^2 = 8.12$, $df = 4$ ($P = 0.09$); $I^2 = 51\%$

Test for overall effect: $Z = 0.26$ ($P = 0.79$)



All-Cause Mortality

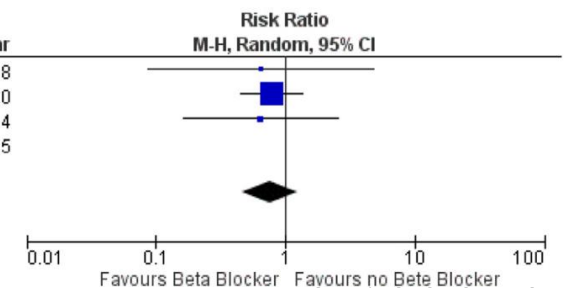
Study or Subgroup	Beta blocker		No Beta blocker		Weight	Risk Ratio M-H, Random, 95% CI	Year
	Events	Total	Events	Total			
Dattilo 2008	1	33	13	277	6.2%	0.65 [0.09, 4.78]	2008
Rangel 2010	18	151	27	177	80.6%	0.78 [0.45, 1.36]	2010
Fanari 2014	3	164	6	212	13.2%	0.65 [0.16, 2.55]	2014
Schmidt 2015	0	26	0	32		Not estimable	2015

Total (95% CI) 374 698 100.0% **0.75 [0.46, 1.24]**

Total events 22 46

Heterogeneity: $\tau^2 = 0.00$; $\chi^2 = 0.09$, $df = 2$ ($P = 0.96$); $I^2 = 0\%$

Test for overall effect: $Z = 1.11$ ($P = 0.27$)



A large red speech bubble with a white border and a small tail pointing downwards, centered on the slide. The background features faint, light gray concentric circles and curved lines.

Grazie per l'attenzione