



# ***SINCOPE***

**Programa de Formación Continua 2010**

**Sociedad de Cardiología de Corrientes**

**Dr. Ignacio Reyes**

# *Síncope: Definición*

**Síncope**: se define como una pérdida de conciencia y del tono postural de aparición brusca y corta duración que se resuelven espontáneamente sin secuelas neurológicas.

**Presíncope**: se utiliza para describir episodios bruscos de enturbiamiento de conciencia e inestabilidad, de los que el paciente se recupera rápidamente sin llegar a la pérdida completa de conciencia. El presíncope se considera una forma frustrada del síncope.

# SINCOPE

Paciente de **62 años** con antec de **HTA** tratada desde hace aprox 10 años, dislipidémico, con antec de **IAM inferior** hace 5 años con controles periódicos con su médico de cabecera.

Consulta al servicio de emergencia por pérdida de conciencia de segundos de duración con restitución ad integrum inmediata incorporándose por sus propios Medios. No relata pródromos

Paciente de **23 años** de edad sin antecedentes previos. Consulta al servicio de emergencia por pérdida de conciencia de segundos de duración con restitución ad integrum en pocos minutos, mientras se encontraba esperando ser atendido durante trámite bancario en ortostatismo. Fue asistido por un amigo que lo vió Sudoroso y pálido. Relata malestar epigástrico y nauseas previo al evento.

# Causas de Síncope

## Cardíaco

### Arrítmico

- ◆ Bradiarritmias
- ◆ Taquiarritmias
- ◆ Disfunción de marcapasos

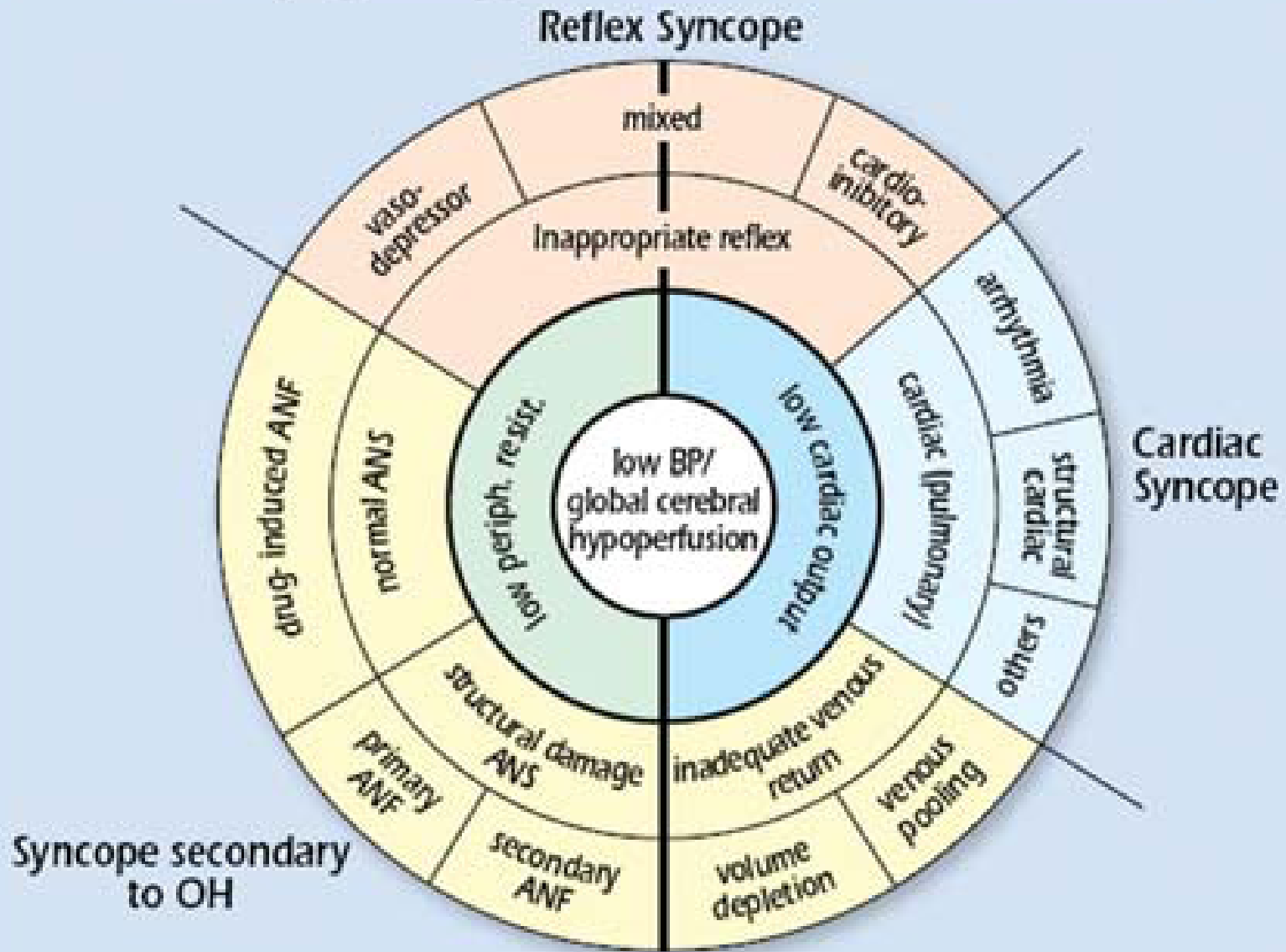
### No-arrítmico

- ◆ Estenosis Aórtica
- ◆ Hipertensión Pulmonar
- ◆ Embolia de Pulmón
- ◆ Aneurisma Disecante de aorta
- ◆ Hipersensibilidad del seno carotídeo
- ◆ Síncope neurocardiogénico.
- ◆ Síncope situacional (tusígeno, defecatorio, miccional)
- ◆ Hipotensión ortostática
- ◆ Inducido por Drogas

## No-cardíaco

- ◆ Ataque isquémico Transitorio
- ◆ Desordenes neurológicos
- ◆ Robo de la Subclavia
- ◆ Anemia
- ◆ Hipoglucemia

# Pathophysiological basis of the classification



# Causas Comunes de Síncope

- En jóvenes
  - Síncope Vasovagal
- En ancianos
  - Enfermedad del nódulo sinusal
  - Bloqueo AV
  - Taquicardia Ventricular
  - Drogas

# ***Síncope: Diagnóstico***

- **Historia clínica**
- ECG
- Holter
- Eco/doppler
- Estudio Electrofisiológico
- Tilt test
- Registrador de Eventos (loop recorder)
- Insertable loop recorder
- Evaluación Neurológica
- Evaluación Psicológica

# Síncope: Diagnóstico

## Historia Clínica:

Características

Fcia. Recurrente??

Drogas

Pródromos

Situaciones desencadenantes

Enfermedad previa

## Examen físico:

TA decúbito y ortostatismo

Búsqueda de enf estructural del corazón

Examen de ambas carótidas

Masaje del seno carotídeo

# Síncope: Características clínicas

Tipo	Pródromos	Posición	Post-síncope
Cardíaco	No	Cualquiera	Normal
Vasodepresor	Frío. Debilidad Sudoración Palidez	Ortostatismo	Recup. Lenta
Ortostático	Cambio posic.	Ortostatismo	Normal

## Historical Criteria That Distinguish Syncope From Seizures

Robert Sheldon, MD, PhD,\* Sarah Rose, PhD,\* Debbie Ritchie, MN,\* Stuart J. Connolly, MD,†  
Mary-Lou Koshman, RN,\* Mary Anne Lee, MD,‡ Michael Frenneaux, MD,§ Michael Fisher, BSc,\*  
William Murphy, MD‡

*Calgary, Alberta; Hamilton, Ontario; and Cardiff, Wales*

**671 Pctes.**

**539 Causa determinada**

**102 Neurológicos**

**437 Síncopes**

**267 V. vagal  
90 TV  
80 (BAV/TPS)**

**Table 1.** Comparison of the Most Significant Historic Features in Patients With Seizures and Established Diagnoses of Syncope

	Sensitivity	Specificity	Likelihood Ratio	p Value (Chi-Square)
	Factors Most Strongly Predictive of Seizures			
Cut tongue	0.451	0.973	16.460	< 0.001
Head turning	0.431	0.968	13.481	< 0.001
Unusual posturing	0.353	0.973	12.880	< 0.001
Bedwetting	0.235	0.964	6.447	< 0.001
Blue color observed by bystanders	0.326	0.944	5.813	< 0.001
Limb jerking noted by others	0.686	0.877	5.566	< 0.001
Prodromal trembling	0.294	0.941	4.951	< 0.001
Prodromal preoccupation	0.078	0.982	4.284	0.002
Prodromal hallucinations	0.078	0.982	4.284	0.002
Behaviors not recalled	0.529	0.868	3.998	< 0.001
Loss of consciousness associated with stress	0.569	0.849	3.773	< 0.001
Muscle pain	0.157	0.954	3.433	0.004
Prodromal déjà vu	0.137	0.959	3.341	0.009
Observed unresponsiveness	0.765	0.749	3.045	< 0.001
Postictal confusion	0.941	0.690	3.031	< 0.001
Postictal headaches	0.490	0.836	2.982	< 0.001
Prodromal mood changes	0.235	0.918	2.863	0.002
Abnormal behaviors* noted by bystanders	0.922	0.671	2.803	< 0.001

**Table 1.** Comparison of the Most Significant Historic Features in Patients With Seizures and Established Diagnoses of Syncope

	Sensitivity	Specificity	Likelihood Ratio	p Value
<b>Factors Most Strongly Predictive Against Seizures</b>				
Presyncopal spells before loss of consciousness	0.275	0.274	0.378	< 0.001
Self-reported high blood pressure	0.098	0.690	0.316	0.002
Presyncope with hot/warm environments	0.078	0.731	0.291	0.004
Presyncope with needle	0.039	0.863	0.286	0.052
Prodromal vertigo	0.059	0.785	0.274	0.010
Any presyncope	0.235	0.137	0.273	< 0.001
Presyncope after exercise	0.078	0.712	0.273	0.002
Hypertension (physician reported)	0.078	0.708	0.268	0.002
Warmth before a spell	0.078	0.662	0.232	< 0.001
Any chest pain	0.098	0.543	0.215	< 0.001
Nausea before a spell	0.059	0.722	0.211	0.001
Remembered loss of consciousness	0.118	0.425	0.204	< 0.001
Presyncope with prolonged sitting/standing	0.059	0.676	0.181	< 0.001
Diaphoresis before a spell	0.059	0.653	0.169	< 0.001
Chest pain before a spell	0.020	0.872	0.153	0.025
Palpitations before loss of consciousness	0.039	0.662	0.116	< 0.001
Dyspnea before loss of consciousness	0.020	0.763	0.083	< 0.001
Coronary heart disease	0.020	0.749	0.078	< 0.001
Loss of consciousness with prolonged sitting/standing	0.020	0.603	0.049	< 0.001

## **Conclusiones:**

Una simple escala de puntaje de la historia clínica, permite distinguir entre convulsiones y síncope con una muy alta sensibilidad y especificidad.

# Síncope: Valor del ECG

## Identifica:

- Anormalidades sugestivas de:
  - IM previo
  - Hipertrofia vent.
  - Agrand de cavidades
- Alteraciones del ritmo:
  - Bradiarritmias: ENS
  - E. V. Complejas
- Trast de conducción:
  - Bloqueo AV
  - Bloqueos de Rama
- Trast eléctricos primarios:
  - QT prolongado
  - Brugada





CARDIO CHARTS



RTS

# ***Síncope: Valor del Holter***

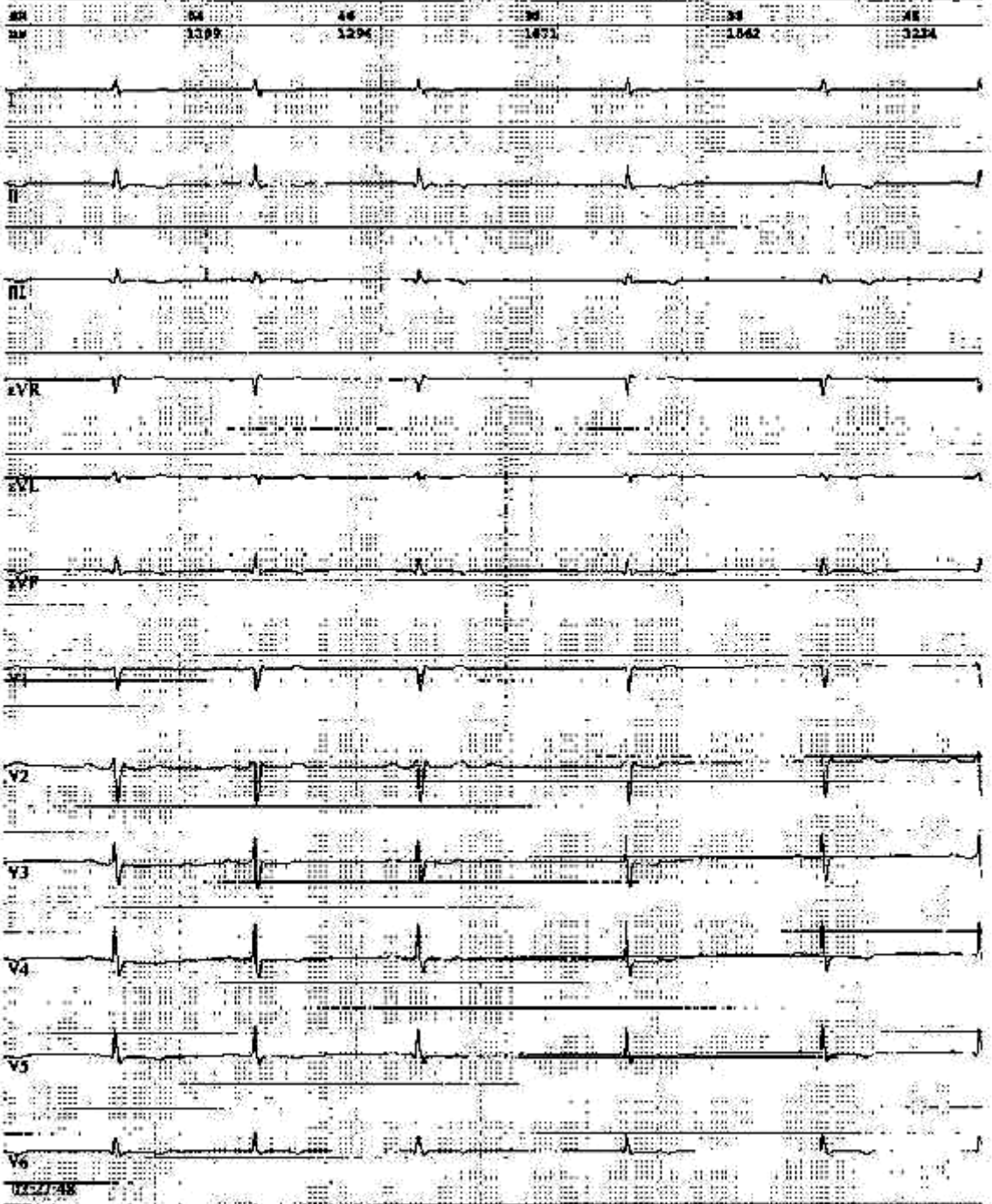
- Para valorar síntomas posiblemente relacionados con arritmias
- Para detección de arritmias en la estratificación de riesgo en ptes asintomáticos.
- Evaluación de la variabilidad de la FC en la estratificación de riesgo.
- Para evaluación de la terapia antiarrítmica
- Para evaluar la función de dispositivos: Marcapasos y cardidesfibriladores.
- Monitoreo del ritmo en ptes pediátricos.

# **Síncope: Valor del Holter**

- Arritmia relacionada con el síntoma      2%  
(síncope o presíncope)
- Síntomas sin arritmias      15%  
(no arrhythmia)

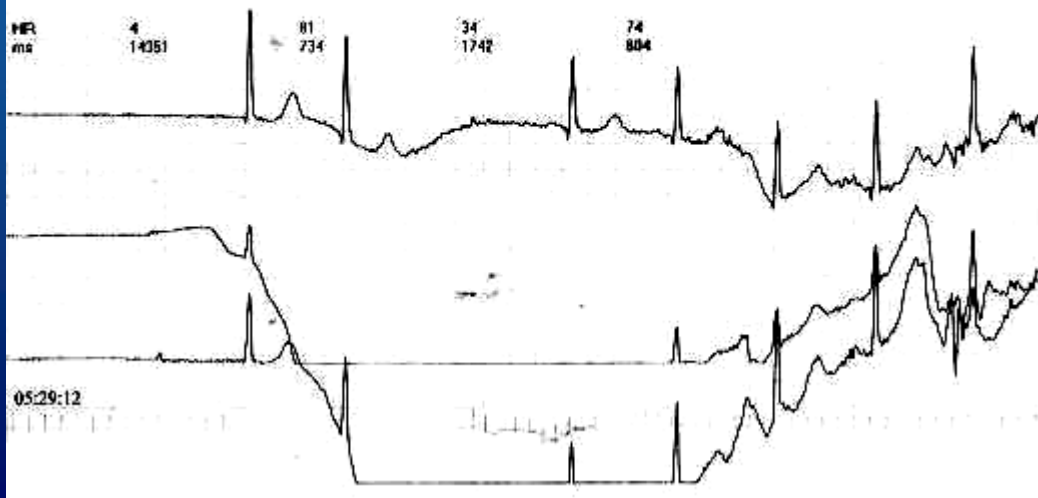
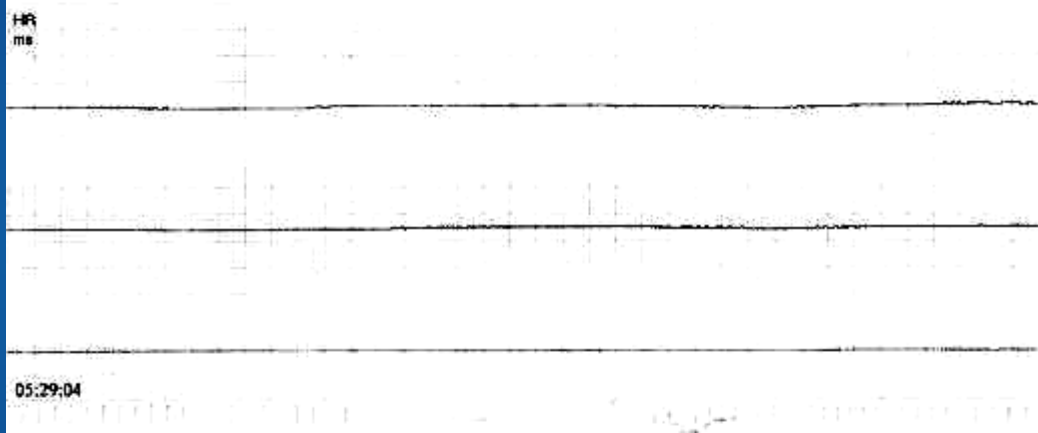
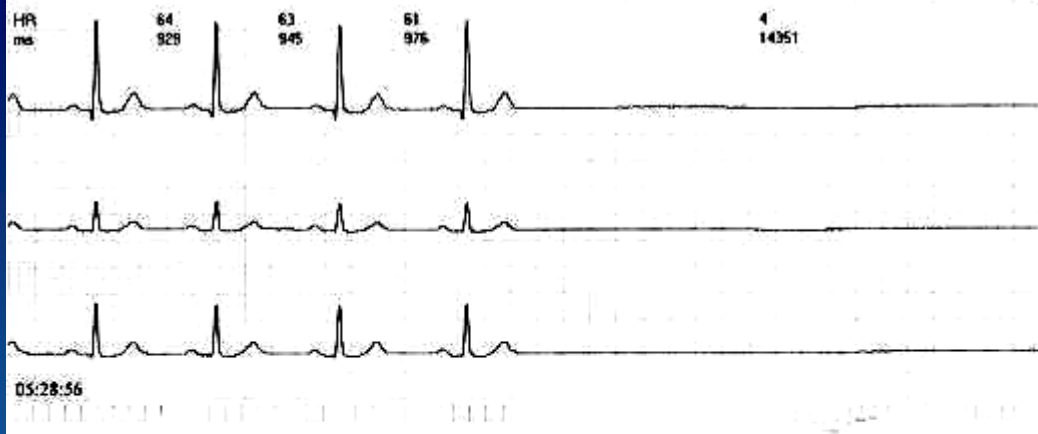
Gibson TC. Am J Cardiol. 1984;53:1013-1017.

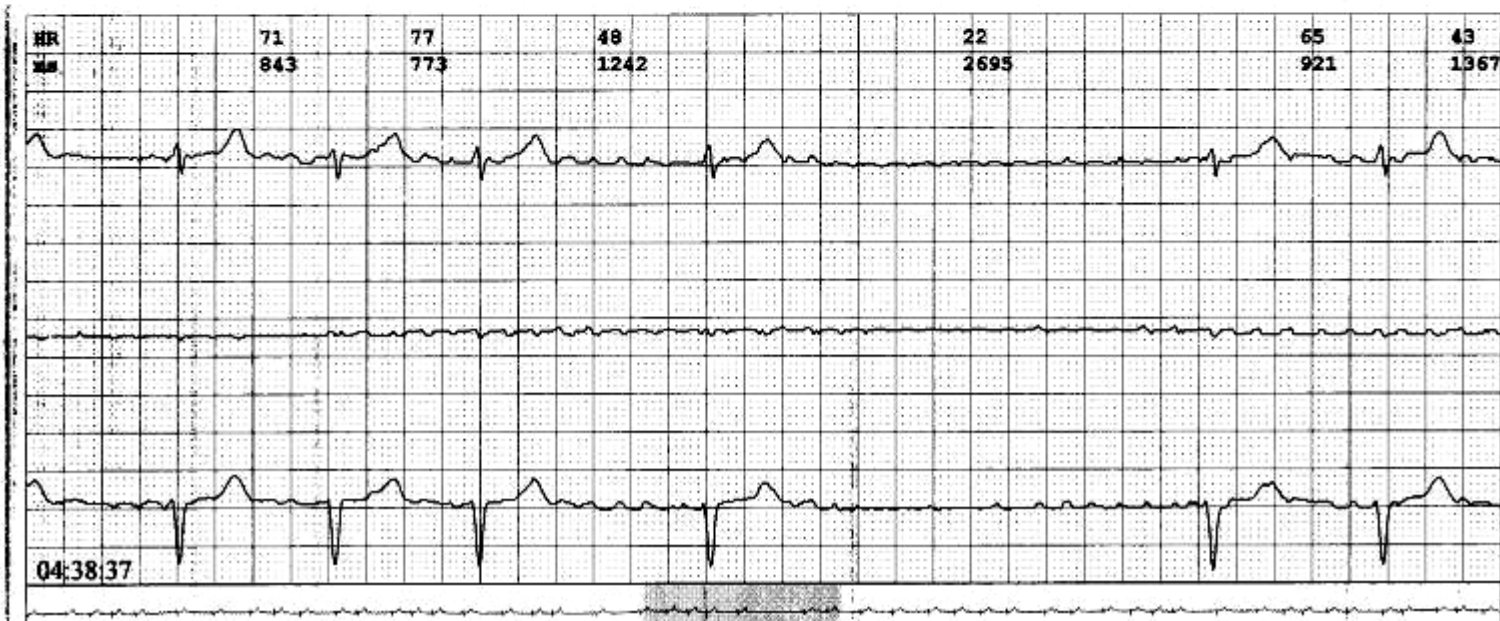
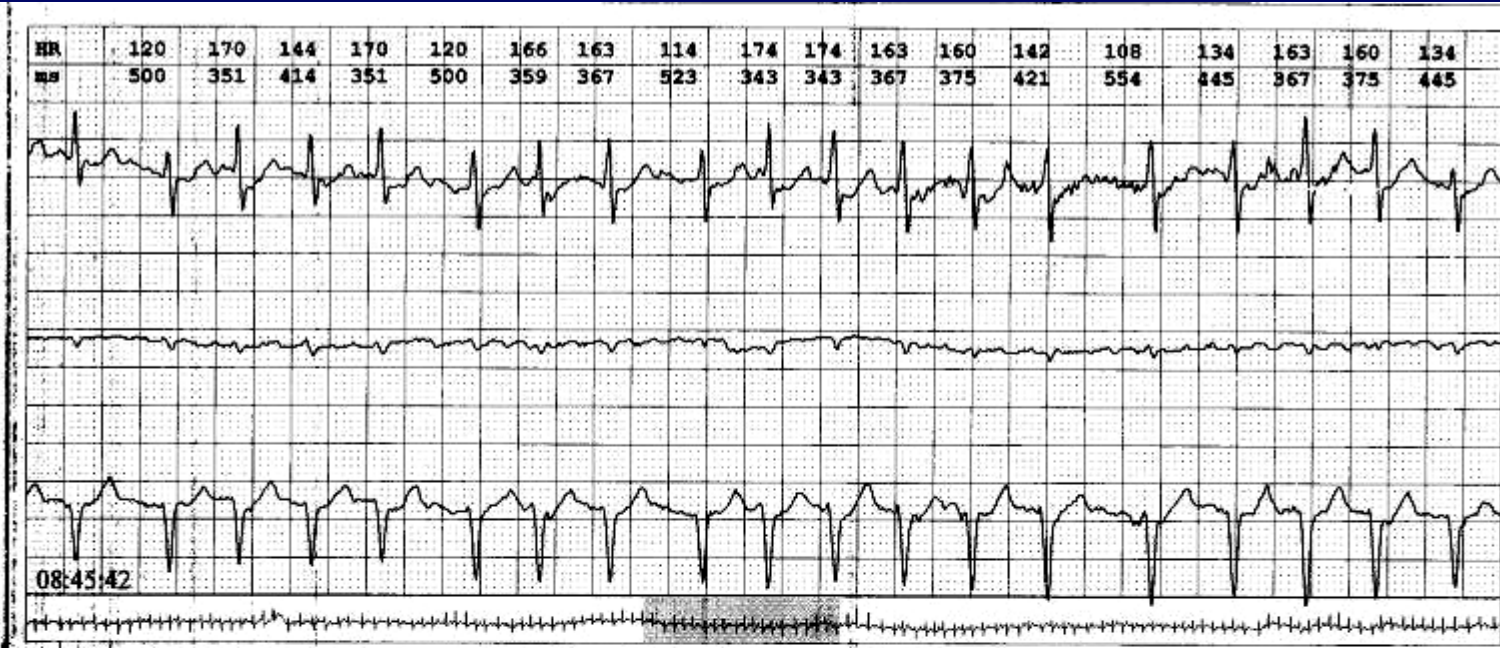
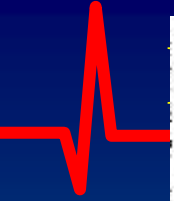
- El valor aumenta con la duración del Holter a 48 horas, pero no a 72 hs.



RR	64	46	30	34	41
HR	1109	1294	1471	1642	1824

11/27/88

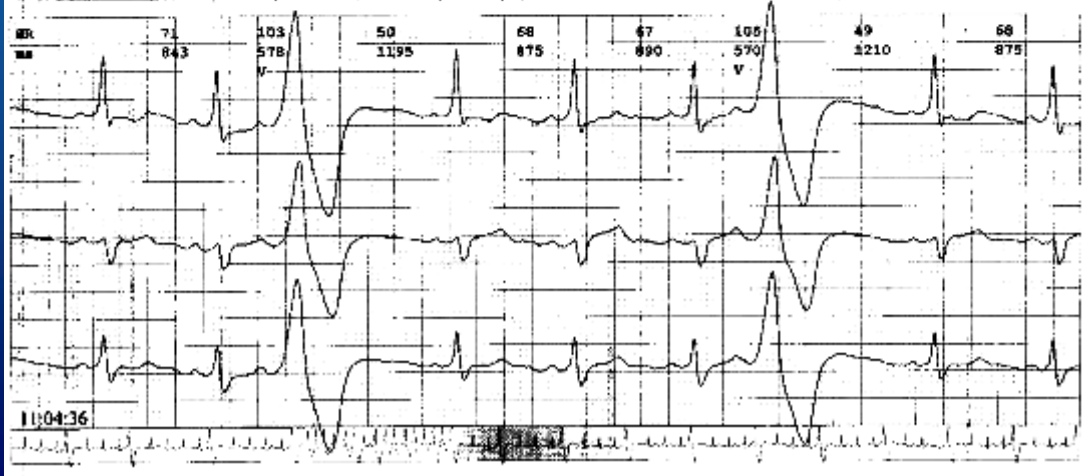
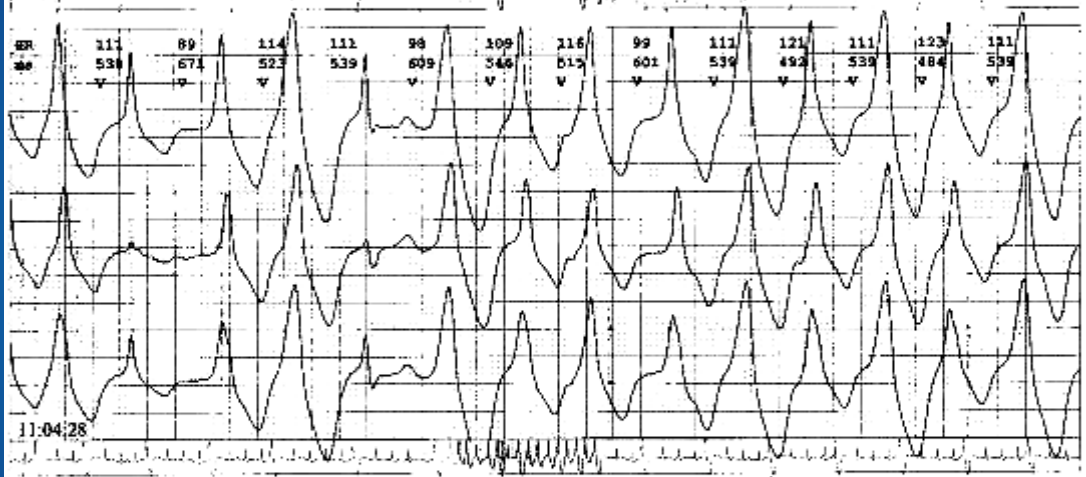
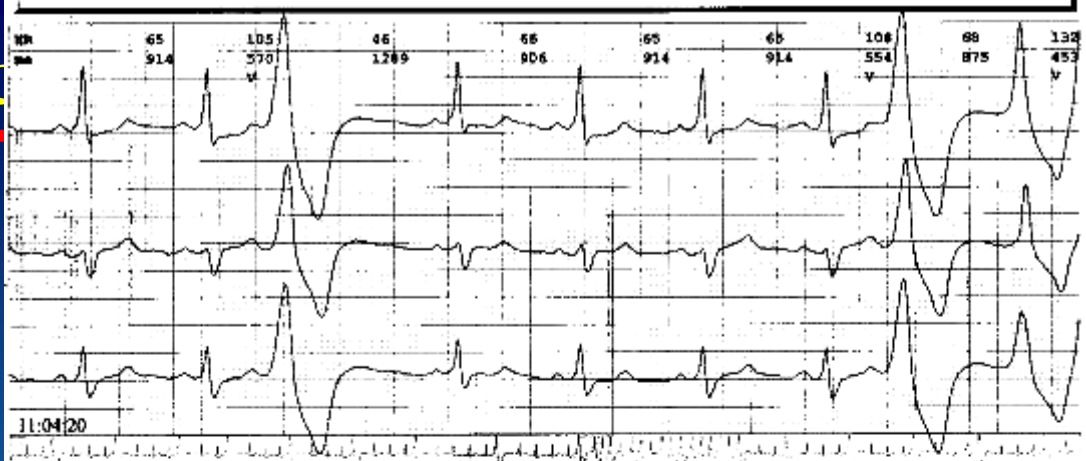




# Electrocardiografía ambulatoria

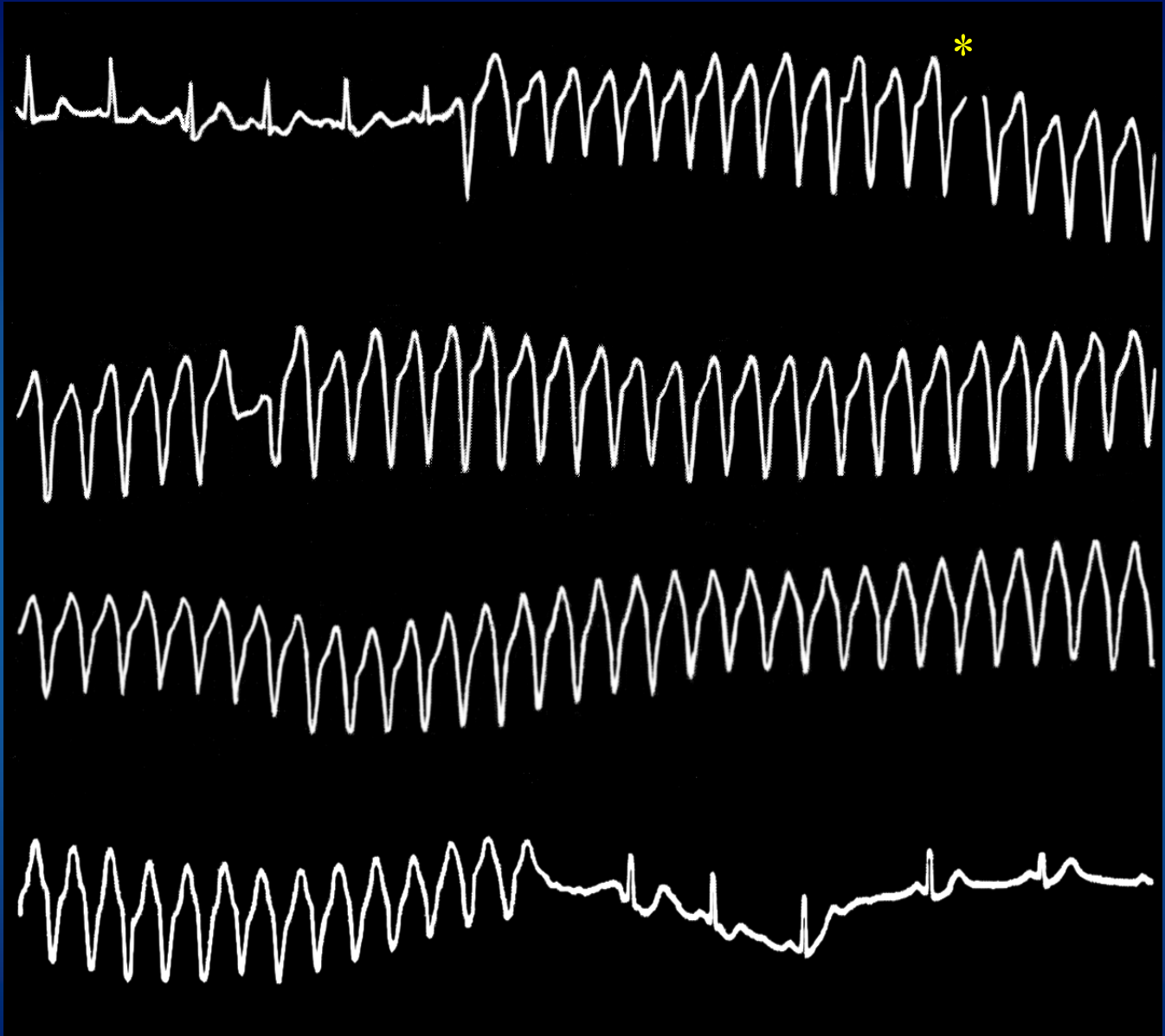


Electro



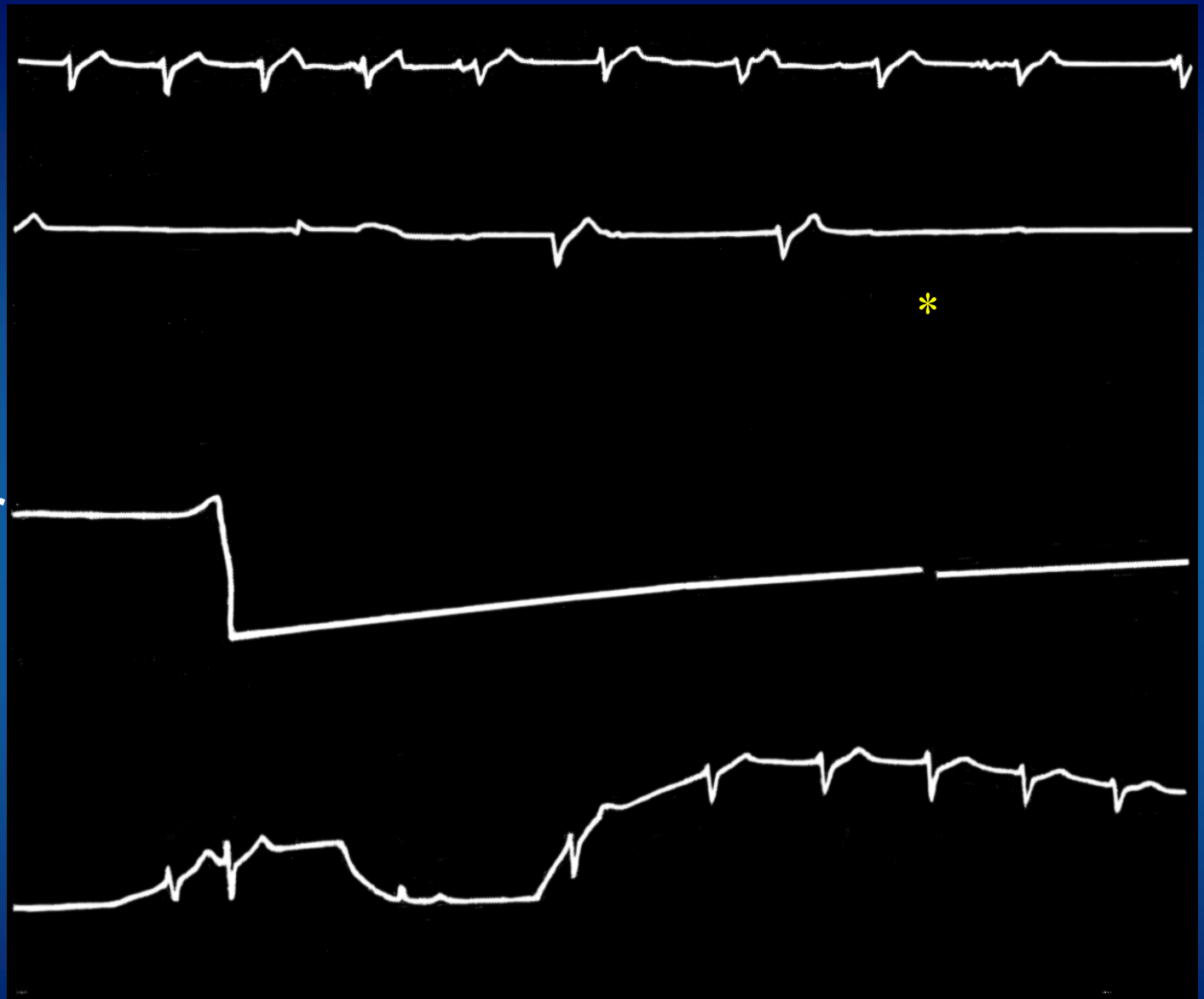


Valor del  
“Registrador  
de eventos”



\*Asterisk denotes  
event marker

Valor del  
“Registrador  
de eventos”



\*Asterisk denotes  
event marker

# Síncope: Contribución diagnóstica de los Test individualmente

Author (N)	Clinical Setting Total	% With Recurrent Syncope	H&P	ECG	Holter	CSM	EPS	Neuro-logic	Other
Eagle (100)	Inpatient 61	33	52	—	3	—	0	2	4
Day (198)	ER 87	37	73	2	2	—	—	9	—
Silverstein (108)	MICU 53	—	39	—	7.5	—	—	—	6.5
Kapoor (204) (1983)	In- and 52 outpatient	68	25	6	14	—	1.5	0.5	5
Martin (170)*	ER 62	—	53	1	3	—	—	5	—
Kapoor (433) (1990)*	All 41	49	32	7	13	1	2	1	3

\*Prospective study

Chang-Sing P. Cardiol Clinics. 1991;9(4):641-651.

Hist C. +Ex Físico

# Síncope: Algoritmo diagnóstico

- **Historia clínica (1)**
- **ECG**
- **Rx de torax**
- Ecocardiograma

Síncope Causa conocida

Síncope Causa desconocida



Con cardiopatía

Sin cardiopatía

**Tratamiento específico**

# Mortalidad Según Causas de Síncope

Author (N)	Mean Follow-Up Period (Months)	Mortality at Follow-up (%)		
		Cardiac Cause of Syncope	Noncardiac Cause of Syncope	Unknown
Day (198)	12	33		
Silverstein (108)	12	19	6	6
Kapoor (204) (1983)	12	30	12	6
Martin (170)	6	30	1	1.5
Kapoor (433) (1990)	≤12	26	8	6
	60	50	31	24

## The ROSE (Risk Stratification of Syncope in the Emergency Department) Study

Matthew J. Reed, MA, MB, BChir, MD\*,\*, David E. Newby, PhD, DM , Andrew J. Coull, BSc, MB, ChB, MD , Robin J. Prescott, BSc, MSC, PhD , Keith G. Jacques, MB, BCh\* and Alasdair J. Gray, MB, ChB, MD\*

**Objectives:** The aim of this study was to develop and validate a clinical decision rule (CDR) to predict 1-month **serious outcome** and **all-cause death** in patients presenting with syncope to the emergency department.

**Background:** Syncope is a common, potentially serious condition accounting for many hospital admissions.

**Methods:** This was a single center, prospective, observational study of adults presenting to the emergency department with syncope. A CDR was devised from 550 patients in a derivation cohort and tested in a validation cohort of a further 550 patients.

**Results:** One-month serious outcome or all-cause death occurred in 40 (7.3%) patients in the derivation cohort. Independent predictors were brain **natriuretic peptide** concentration 300 pg/ml (odds ratio [OR]: 7.3), positive **fecal occult blood** (OR: 13.2), hemoglobin < 90 g/l (OR: 6.7), **oxygen saturation** < 94% (OR: 3.0), and **Q-wave** on the presenting electrocardiogram (OR: 2.8). One-month serious outcome or all-cause death occurred in 39 (7.1%) patients in the validation cohort. The ROSE (Risk stratification Of Syncope in the Emergency department) rule had a sensitivity and specificity of 87.2% and 65.5%, respectively, and a negative predictive value of 98.5%. An elevated B-type natriuretic peptide (**BNP**) concentration alone was a **major predictor of serious cardiovascular outcomes** (8 of 22 events, 36%) and all-cause deaths (8 of 9 deaths, 89%).

**Conclusions:** The ROSE rule has excellent sensitivity and negative predictive value in the identification of high-risk patients with syncope. As a component, BNP seems to be a major predictor of serious cardiovascular outcomes and all-cause death. The ROSE rule and BNP measurement might be valuable risk stratification tools in patients with emergency presentations of syncope and should now be subjected to external validation

## Early and late outcome of treated patients referred for syncope to emergency department: the EGSYS 2 follow-up study.

[Andrea U](#), [Attilio DR](#), [Franco G](#), [Angelo B](#), [Raffaello F](#), [Fabio Q](#), [Alfonso L](#), [Alessandro M](#), [Chiara M](#), [Maurizio L](#), [Giuseppe DM](#), [Tiziana DS](#), [Niccolò M](#), [Michele B](#); for the Evaluation of Guidelines in Syncope Study 2 (EGSYS 2) group.

Unit of Geriatric Cardiology and Medicine, Department of Critical Care Medicine and Surgery, University of Florence, Viale Pieraccini 6, 50141 Florence, Italy.

**Aims** We evaluated the early (1 month) and late (2 years) death rate and syncopal relapses of patients referred for syncope to 11 general hospitals emergency departments. Patients were enrolled in the **E**valuation of **G**uidelines in **S**yncope **S**tudy **2** (EGSYS 2) study. The guidelines of the European Society of Cardiology were strictly followed in the management of patients.

**Methods and results** Out of the 465 patients enrolled in the EGSYS 2 study, 398 (86%) underwent a complete follow-up. We excluded 18 patients with non-syncopal attacks. Among the remaining 380 patients, death of any cause occurred in 35 (9.2%). The mean follow-up was 614 +/- 73 days. Six deaths (17% of total) occurred during the first month of follow-up. Patients who died were older, had a higher incidence of structural heart disease and/or abnormal ECG, had injuries related to syncope and higher EGSYS score. Syncope recurred in 63 (16.5%) patients. Syncopal relapses occurred in only one patient during the first month of follow-up. The incidence of syncopal recurrences was unrelated to the mechanism of syncope. No clinical differences were found between patients with or without syncopal recurrence and in patients with EGSYS score < or >/=3.

**Conclusion** A peak of cardiovascular mortality but not of syncopal recurrences was observed in patients attending to the emergency department for syncope within the first month. **Late unfavourable outcomes were caused by associated cardiovascular diseases** rather than by the mechanism of syncope. The causes of syncope did not determine the recurrence rate.

# ***Síncope: Diagnóstico***

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- **Historia clínica**
- ECG
- Holter
- Eco/doppler
- Estudio Electrofisiológico
- Tilt test
- Registrador de Eventos (loop recorder)
- Insertable loop recorder
- Evaluación Neurológica
- Evaluación Psicológica

## **Síncope de causa desconocida**

**Con Cardiopatía**

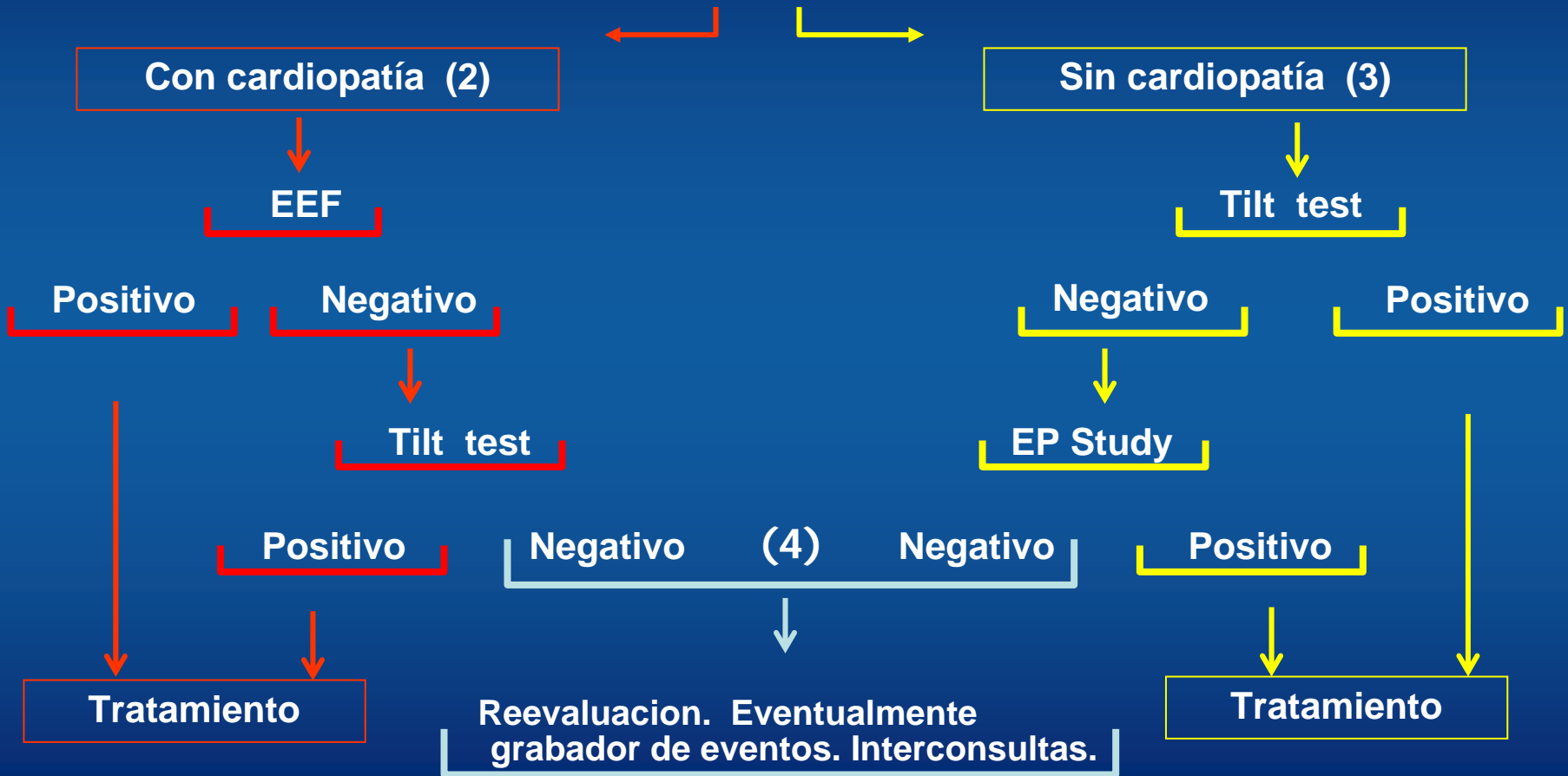
**Sin Cardiopatía**

**Dr. Rolando E Pantich**

**Dra. Stella M Rúveda**

# Síncope: Algoritmo diagnóstico

## Síncope de causa desconocida



(2) Jerarquizar la evidencia de IAM previo y la función ventricular deprimida. **Internación!**

(3) Descartar trast genéticos. Jerarquizar historia familiar.

(4) Especialmente en ptes con síntomas recurrentes o traumáticos