La sincope ipotensiva: diagnosi e terapia in OBI (Osservazione breve intensiva)

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Disclosure *30 anni con Ungar..*

Sixth European Hypertension Meeting
iMilan 4th–9th June 1993

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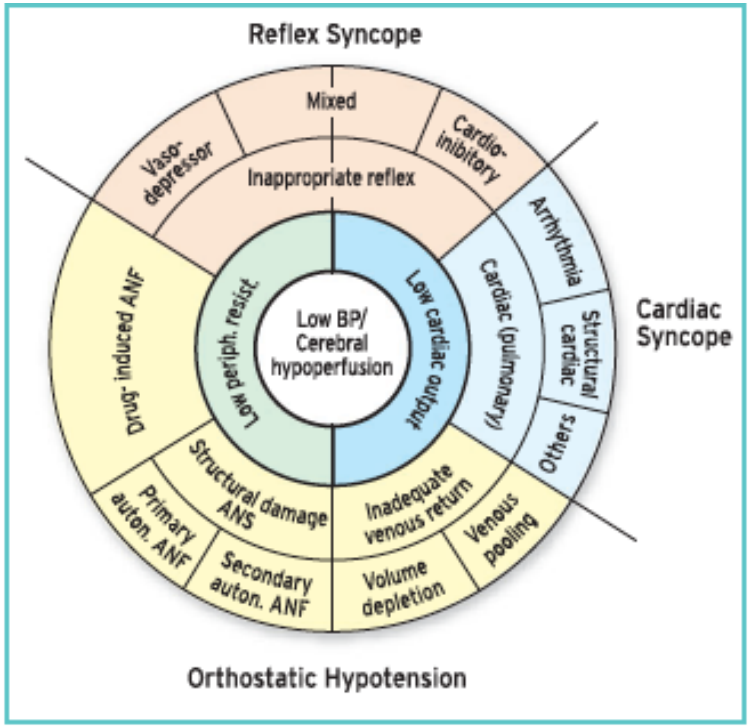
CONG

n Syncope Course

ESC European Society of Cardiology
European Heart Journal (2018) **39**, 1883–1948
doi:10.1093/eurheartj/ehy037

2018 ESC Guidelines for the diagnosis and management of syncope



2018 NEW/REVISED CONCEPTS in management of syncope

MANAGEMENT IN EMERGENCY DEPARTMENT:

- List of low-risk and high-risk features
- Risk stratification flowchart
- Management in *ED Observation Unit* and/or fast-track to *Syncope Unit*
- Restricted admission criteria
- Limited usefulness of risk stratification scores

pagepress

Emergency Care Journal 2016; volume 12:6046

Management of transient loss of consciousness of suspected syncopal cause, after the initial evaluation in the Emergency Department

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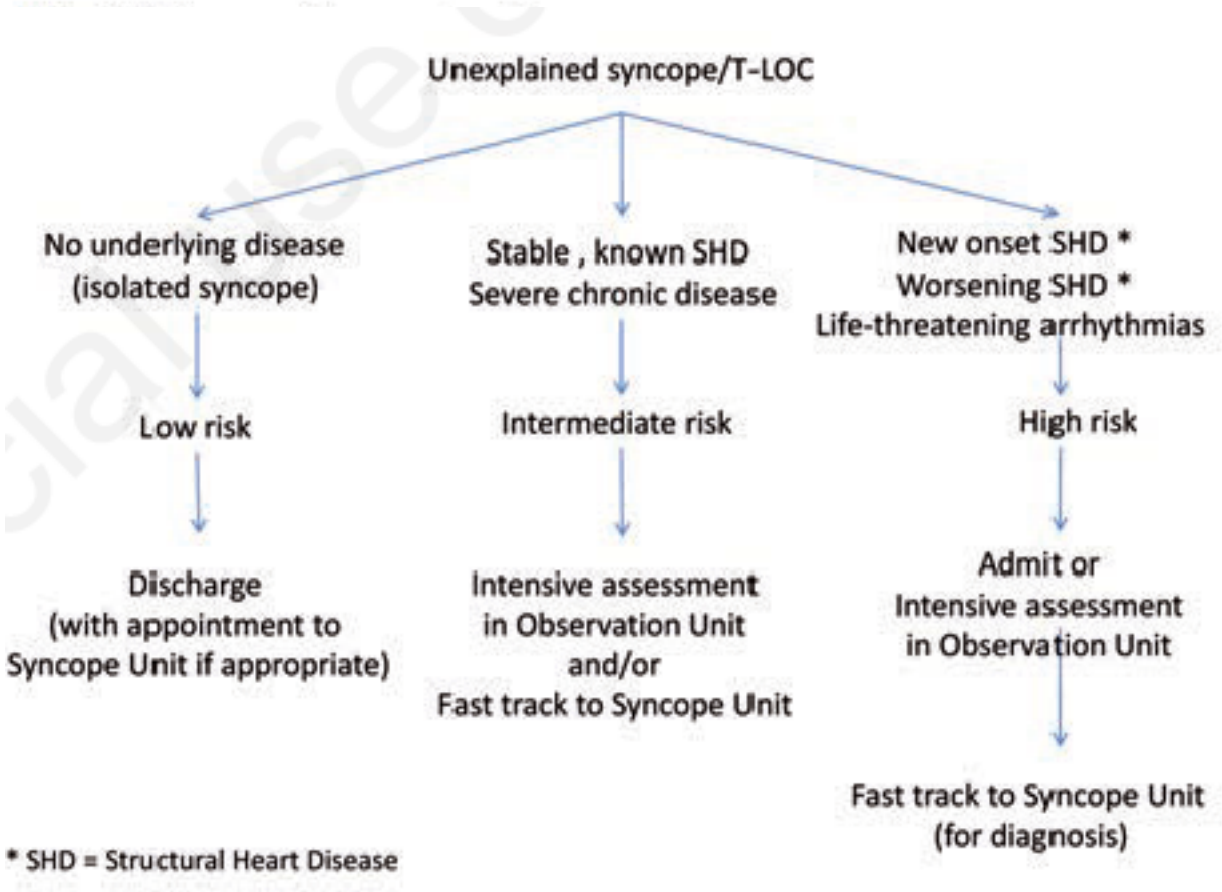
Note: this consensus document has been approved by the *Gruppo Multidisciplinare per lo Studio della Sincope* (Multidisciplinary Group for the Study of Syncope; GIMSI) and the Academy of Emergency Medicine and Care (AcEMC) Task Force on April 17th, 2015.



Emergency Care Journal 2018; volume 14:7430

Management of syncope in the emergency department based on risk stratification

Matthew James Reed

Requirements of an emergency department syncope observation unit

An ED syncope observation unit should have the following tests, equipment, and characteristics: ECG and BP monitoring, standing test facilities, carotid sinus massage capability, echocardiogram, blood tests, and availability of consultation by a syncope expert and neurologists, cardiologists, geriatricians, and psychiatrists where required.

Europace (2016) **18**, 457–462
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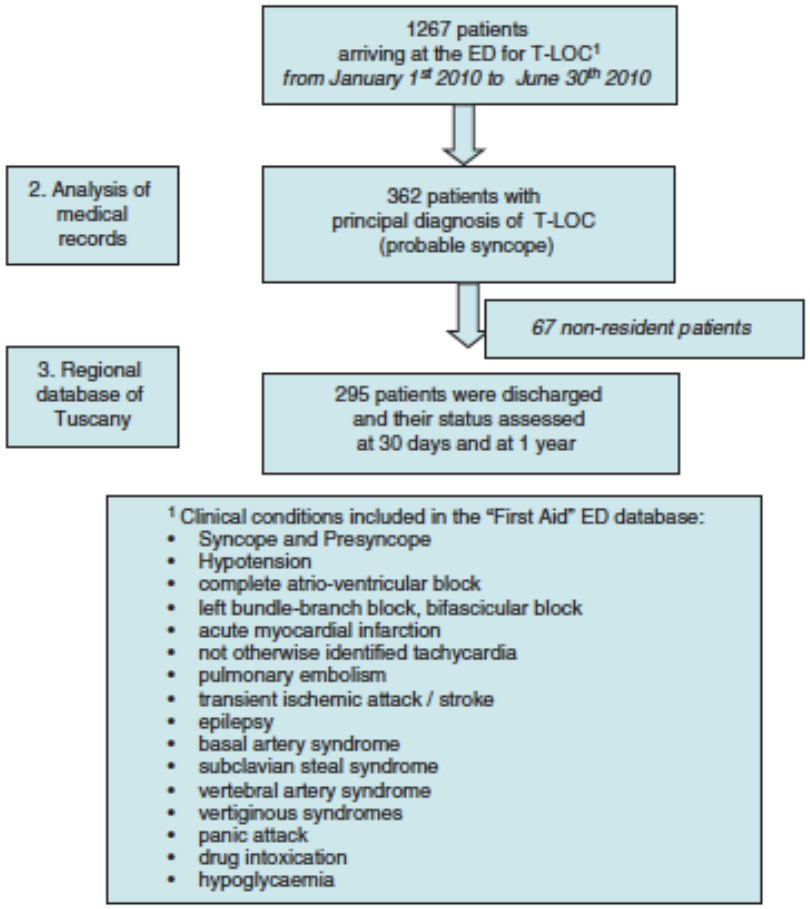
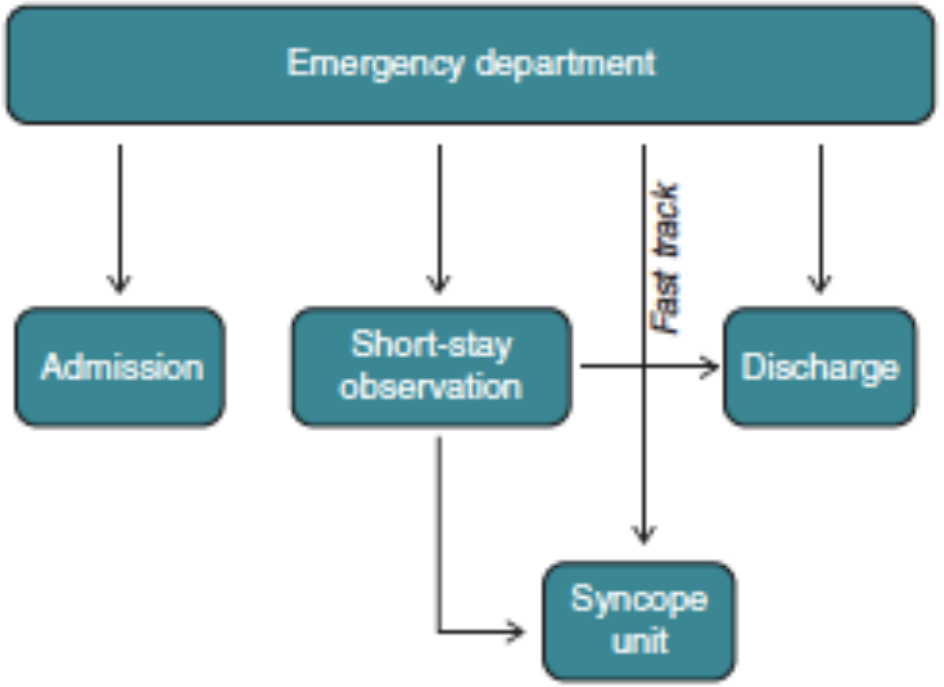
Assessment of a structured management pathway for patients referred to the Emergency Department for syncope: results in a tertiary hospital





Europace (2016) 18, 457–462
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Assessment of a structured management pathway for patients referred to the Emergency Department for syncope: results in a tertiary hospital

In Short-Stay Observation Unit, inside the ED, patients with T-LOC undergo, when necessary, continuous in-bed ECG monitoring, blood tests, echocardiography, stress testing, and vessel ultrasound examination. Neuroautonomic evaluation (Tilt Table Test and Carotid Sinus Massage) is not provided in the ED or in Short-Stay Observation, whereas it may be performed in patients admitted to the hospital. The

- Reduced admission rate to 29%
- Among patients not admitted,
- 20% were discharged after a short observation in the ED,
- 20% were fast-tracked to the syncope unit,
- 31% were discharged directly from the ED

	Admissions (n = 85)	Short-Stay Observation (n = 60)	Syncope Unit (n = 58)	Discharges (n = 92)	P
Age (median, interquartile range)	77 (71–84)	68.5 (47–79)	62.5 (43–78)	53.0 (32.7–74.5)	<0.001
EGSYS Score (median, interquartile range)	3 (1;3)	2 (0;3)	1.5 (−1;3)	0.4 (−1;2)	<0.001
Abnormal ECG, n (%[a])	23 (27.1)	12 (20.0)	9 (15.5)	6 (6.5)	0.005
EGSYS score >3, n (%[a])	45 (52.9)	17 (28.3)	10 (17.2)	14 (15.2)	<0.001
CV disease, n (%[a])	64(75.3)	33 (55.0)	27 (46.6)	32 (34.8)	<0.001
Trauma, n (%[a])	22 (25.9)	16 (26.7)	12 (20.7)	14 (15.2)	0.397
ED diagnosis					
Cardiac syncope, n (%[a])	17 (20.0)	5 (8.3)	3 (5.2)	3 (3.2)	<0.001
Neurally mediated syncope, n (%[a])	13 (15.3)	26 (43.3)	20 (34.5)	70 (76.1)	<0.001
Non-syncopal T-LOC, n (%[a])	11 (12.9)	9 (15.0)	2 (3.4)	6 (6.5)	<0.001
Unexplained syncope, n (%[a])	44 (51.8)	20 (33.4)	33 (56.9)	13 (14.1)	<0.001

Role of emergency department observation units in the management of patients with unexplained syncope: a critical review and meta-analysis

Study	Year	Country	Design	Patients (n)	Male (%)	Mean age (yr)	CV disease (%)	Inclusion criteria
Shen et al.[11]	2004	US	RCT	51	49	64	43	Patients with undetermined syncope at intermediate risk
Rodriguez-Entem et al.[12]	2008	Spain	OS	199	54	67	NA	Patients not selected on a risk category basis
Sun et al.[13]	2013	US	RCT	62	47	65	23	Patients with undetermined syncope at intermediate risk
Grossman et al.[14]	2015	US	OS	27	33	53	22	Patients not selected on a risk category basis
Ungar et al.[15]	2016	Italy	OS	60	40	68.5	55	Patients not selected on a risk category basis
Numeroso et al.[16]	2016	Italy	OS	59	59	66.7	15	Patients with undetermined syncope at intermediate risk

CV, cardiovascular; RCT, randomized controlled trial; OS, observational study; NA, not applicable.

Numeroso F et al. **Clin Exp Emerg Med 2017;4(4):201-207**

Role of emergency department observation units in the management of patients with unexplained syncope: a critical review and meta-analysis

Table 2. Endpoints reported by the studies included

Study	Patients	Mean LOS hours (SD)	Admission rate	Etiological diagnosis	Short term outcomes
Shen et al.[11]	51	NA	22 (43.1)	34 (66.6)	NA
Rodriguez-Entem et al.[12]	199	19 (15)	20 (10.0)	131 (65.8)	NA
Sun et al.[13]	62	29 (15)	9 (14.5)	NA	2 (3.2)
Grossman et al.[14]	27	NA	NA	12 (44.4)	NA
Ungar et al.[15]	60	34 (8)	7 (11.6)	40 (66.6)	3 (5.0)
Numeroso et al.[16]	59	41 (17)	NA	42 (71.2)	0 (0.0)

Values are presented as number (%) unless otherwise indicated.
LOS, length of stay; SD, standard deviation; NA, not applicable.

Table 3. Pooled estimates for the outcomes

Outcome	Sample size	Pooled estimates, % (95% CI)
Mean length of stay in the EDOU	380	28.2 (26.7–29.7)
Etiological diagnosis	396	67.3 (58.1–75.9)
Admission rate	372	18.5 (7.8–32.4)
Serious outcomes	181	2.8 (0.4–7.2)

CI, confidence interval; EDOU, emergency department observation unit.

Numeroso F et al. **Clin Exp Emerg Med 2017;4(4):201-207**

European Heart Journal (2018) **39**, 1883–1948
doi:10.1093/eurheartj/ehy037

2018 ESC Guidelines for the diagnosis and management of syncope

Author/year/country	Patients with T-LOC	Number admitted	7-30 day Death	7-30 day non-fatal severe outcome[a]	7-30 day non-fatal severe outcome identified in the ED	7-30 day non-fatal severe outcome[a] identified after initial visit
Costantino, 2008, Italy[25]	676	218 (32%)	5 (			
Brignole, 2006, Italy[26]	465	178 (38%)	6 (			
Reed, 2010, UK[9]	1100	541 (49%)	17 (			
Ungar, 2015, Italy[34]	295	92 (31%)	1 (			
Birnbaum, 2008, US[27]	713	613 (86%)	4 (			
Grossman, 2007, US[28]	293	201 (69%)	7 (			
Quinn, 2004, US[29]	684	376 (55%)	5 (			
Quinn, 2006, US[15]	760	448 (59%)	3 (			
Schladenhaufen, 2008, US[30]	517	312 (60%)	5 (			
Sun, 2007, US[31]	477	277 (58%)				
Daccarett, 2011, US[32]	254	118 (46%)	1 (			
Thiruganasambanda-moorthy, 2014, CAN[33]	505	62 (12%)	5 (			
Thiruganasambanda-moorthy, 2015, CAN[34]	3662[b]	474 (13%)	31 (0.9%)	345 (10.3%)	225 (6.7%)	120 (3.6%)
Median (IQR)		*49% (32-59)*	*0.8% (0.6-1.1)*	*10.3% (7.6-13.0)*	*6.9% (4.5-10.3)*	*3.6% (3.4-5.3)*

[a]Nonfatal severe outcomes generally are defined as a significant new diagnosis, a clinical deterioration, serious injury with recurrence, or a significant therapeutic intervention; [b]3365 patients had 30 day follow-up.

Short-term outcome of syncope pts in ED

Average data of 10401 patients from 13 studies:	
Patients admitted, median (IQR)	**49%** (32-59)
Death within 7-30 days:	**0.8%** (0.6-1.1)
Non-fatal severe outcome while in ED	**6.9%** (4.5-10.3)
Non-fatal severe outcome in the next 7-30 days	**3.6%** (3.4-5.3)

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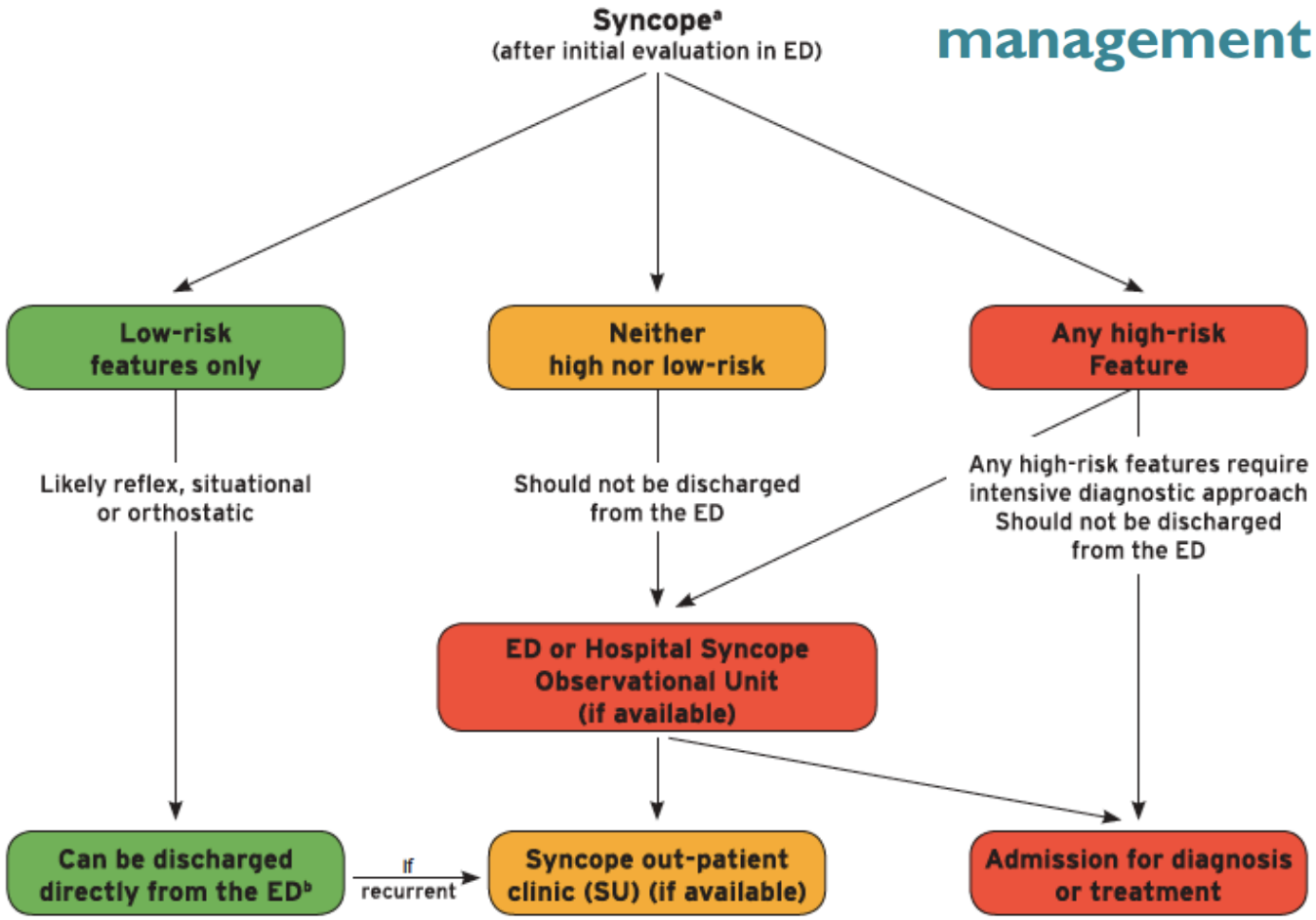

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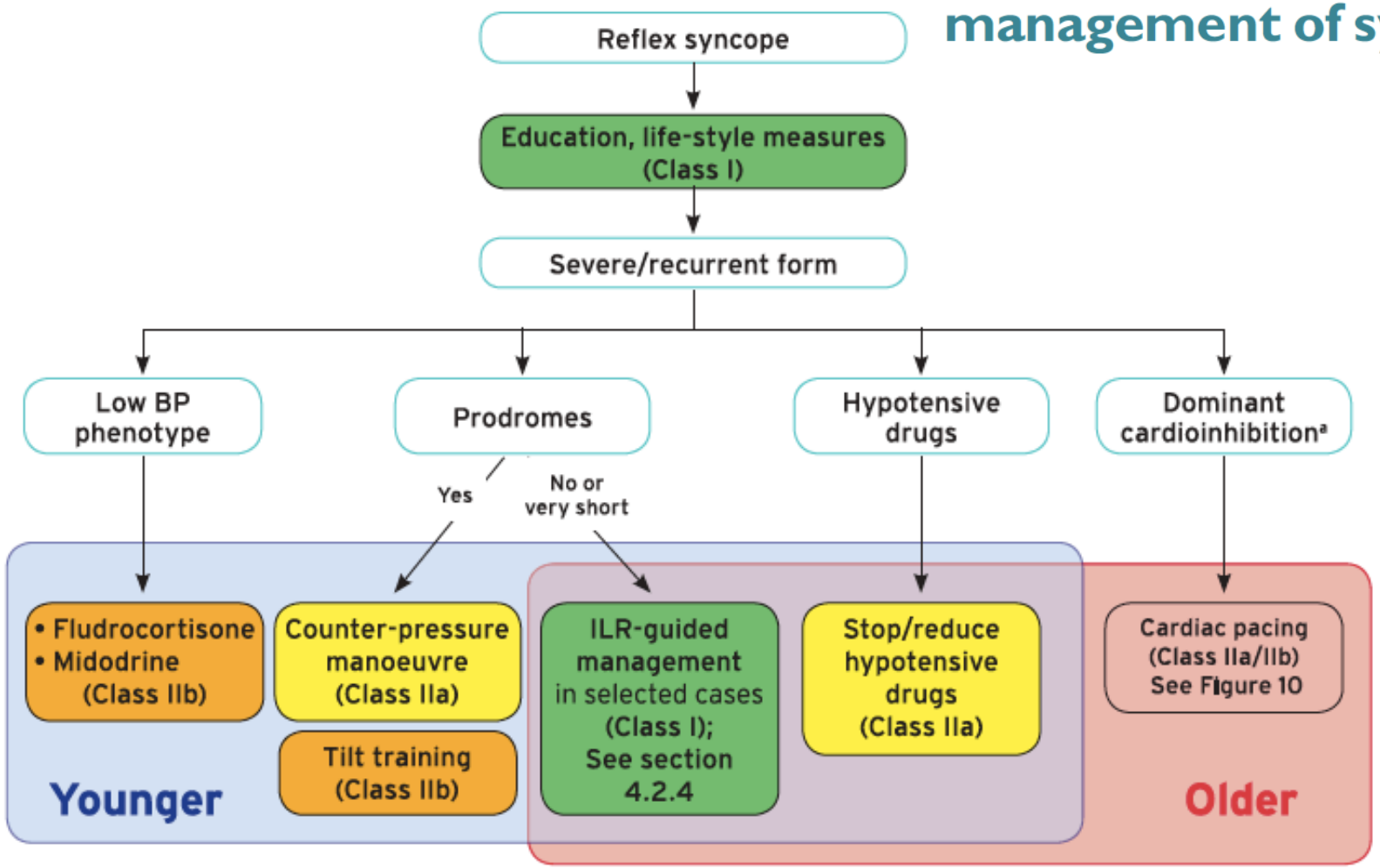

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2018 ESC Guidelines for the diagnosis and management of syncope

Treatment syncope: Counterpressure manoeuvres

Treatment of Reflex syncope (I)

ESC European Society of Cardiology

Recommendations	Class	Level
Education and life-style modification		
1. Explanation of the diagnosis, provision of reassurance, explanation of risk of recurrence, avoidance of triggers and situations are indicated in all patients.	I	B
Discontinuation/reduction of hypotensive therapy		
2. Modification or discontinuation of hypotensive drug regimen should be considered in patients with vasodepressor syncope, if possible.	IIa	B
Physical manoeuvres		
3. Isometric PCM should be considered in patients with prodromes who are less than 60 years of age.	IIa	B
4. Tilt training may be considered for the education of young patients.	IIb	B

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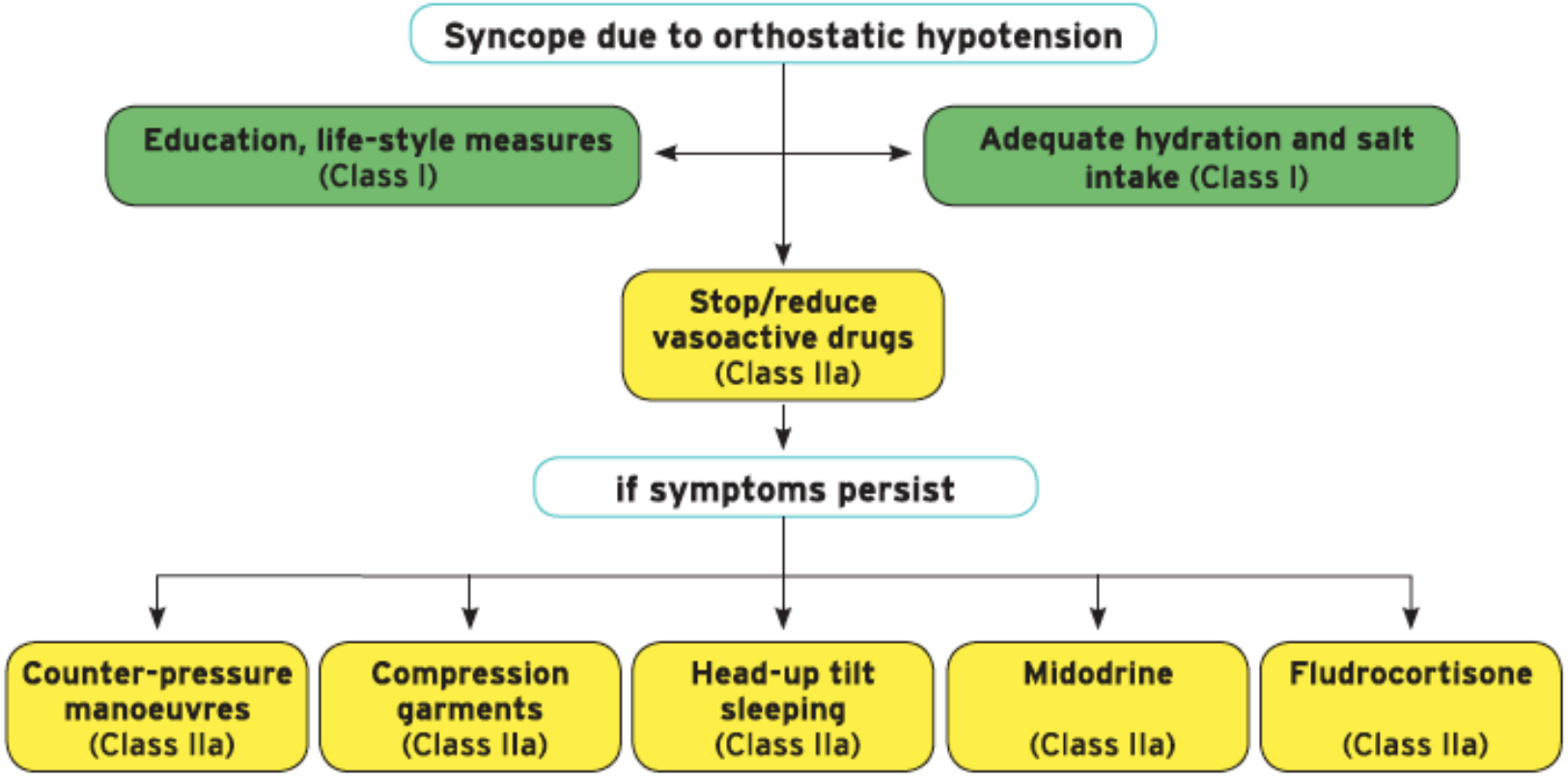

Evaluation of Patients with Syncope in the Emergency Department: How to Adjust Pharmacological Therapy

- Reflex syncope and orthostatic hypotension are the most frequent causes of transientcloss of consciousness, considered as a cardiovascular cause of orthostatic intolerance.
- Anti-hypertensive, psychoactive medications, opioids and other classes of drugs have vaso-active effects and might predispose a patient to orthostatic hypotension and syncope.
- Accurate therapeutic recognition is an important step in the assessment of syncope.
- Proper management of the pharmacological therapy could reduce syncope recurrences andtheir consequences.

Rafanelli M et al. Medicina 2021, 57, 603

ESC European Society of Cardiology
European Heart Journal (2018) **00**, 1–98
doi:10.1093/eurheartj/ehy339

2018 ESC/ESH Guidelines for the management of arterial hypertension

Geriatric alliance

Age group	Office SBP treatment target ranges (mmHg)					Office DBP treatment target range (mmHg)
	Hypertension	+ Diabetes	+ CKD	+ CAD	+ Stroke[a]/TIA	
18 - 65 years	**Target to 130** *or lower if tolerated* Not <120	**Target to 130** *or lower if tolerated* Not <120	**Target to <140 to 130** *if tolerated*	**Target to 130** *or lower if tolerated* Not <120	**Target to 130** *or lower if tolerated* Not <120	70–79
65 - 79 years[b]	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	70–79
≥80 years[b]	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	70–79
Office DBP treatment target range (mmHg)	70–79	70–79	70–79	70–79	70–79	

Evaluation of Patients with Syncope in the Emergency Department: How to Adjust Pharmacological Therapy

	Age < 70	Age > 70 or Frailty	Disability
Low syncope risk and high CV risk	120–130 mmHg	130–140 mmHg	<160 mmHg
High syncope risk and low CV risk	130–140 mmHg		

Rafanelli M et al. Medicina 2021, 57, 603

Journal of Gerontology: MEDICAL SCIENCES
Cite journal as: J Gerontol A Biol Sci Med Sci
doi:10.1093/gerona/glp028

Orthostatic Hypotension As Cause of Syncope in Patients Older Than 65 Years Admitted to Emergency Departments for Transient Loss of Consciousness

Chiara Mussi,[1] Andrea Ungar,[2] Gianfranco Salvioli,[1] Carlo Menozzi,[3] Angelo Bartoletti,[4] Franco Giada,[5] Alfonso Lagi,[6] Irene Ponassi,[7] Giuseppe Re,[8] Raffaello Furlan,[9] Roberto Maggi,[10] and Michele Brignole,[10] for the Evaluation of Guidelines in Syncope Study 2 Group*

Table 3. Multivariate Analysis

	OR	95% CI	*p*
Parkinson's disease	10.91	2.645–45.05	.001
Use of diuretics	3.73	1.23–11.28	.020
Use of nitrates	5.20	1.99–13.61	.001

Note: Other variables included in the model: age, sex, ischemic heart disease, hypertension, hypertensive heart disease, valvular heart disease, myocardiopathy, other cardiac diseases, diabetes, ischemic cerebral diseases, other neurological diseases, electrocardiographic findings, type of drugs, daily dosage. CI = confidence interval; OR = odds ratio.

Evaluation of Patients with Syncope in the Emergency Department: How to Adjust Pharmacological Therapy

Low Risk

ACE-inhibitors

Angiotensin receptor blockers (ARB)

High Risk

Nitrates

Nonselective Alpha-lytics

Diuretics

Beta-blockers

Rafanelli M et al. Medicina 2021, 57, 603

Key Points

1. Considering the reduction or withdrawal of hypotensive medication.
2. *Considering changing molecules or therapy regimen (preferring bedtime administration, except for diuretics) when it is not possible to withdraw a hypotensive medication.*
3. Preferring selective beta-blockers instead of alpha- and beta-receptor blockers, when indicated.
4. Preferring uro-selective alpha-lytics in patients with BPH-associated LUTS (e.g., silodosin), when indicated.
5. Avoiding diuretics, unless specifically indicated as essential.
6. Considering renal and hepatic impairment in order to avoid drug accumulation.

BPH: benign prostatic hyperplasia; LUTS: low urinary tract symptoms.

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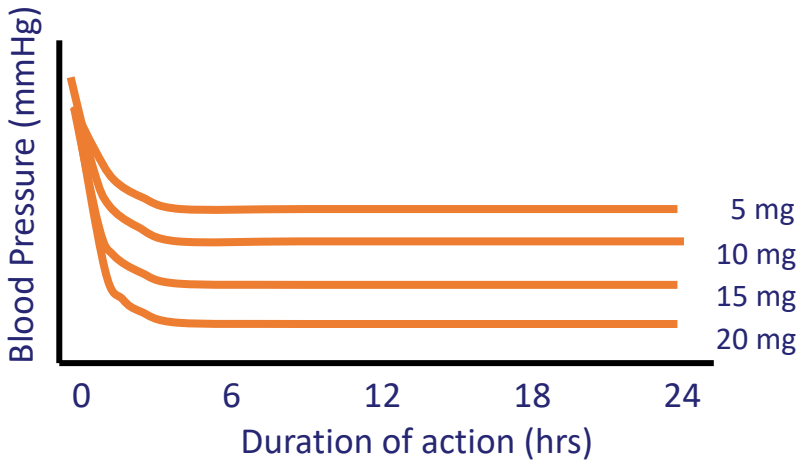
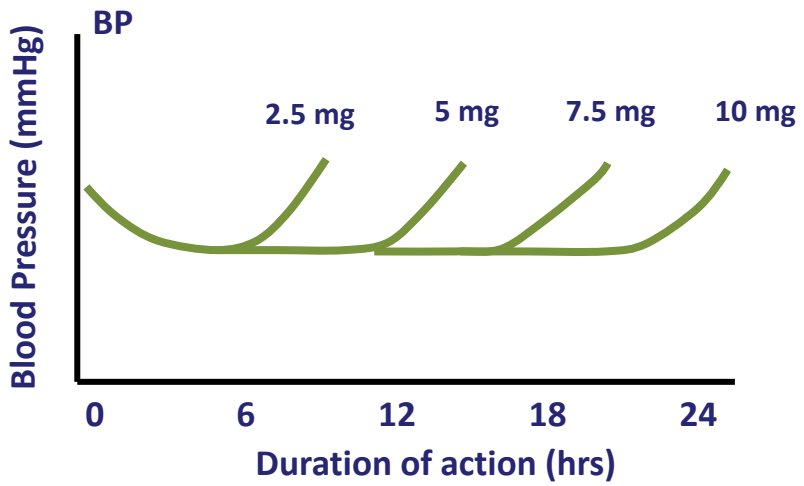
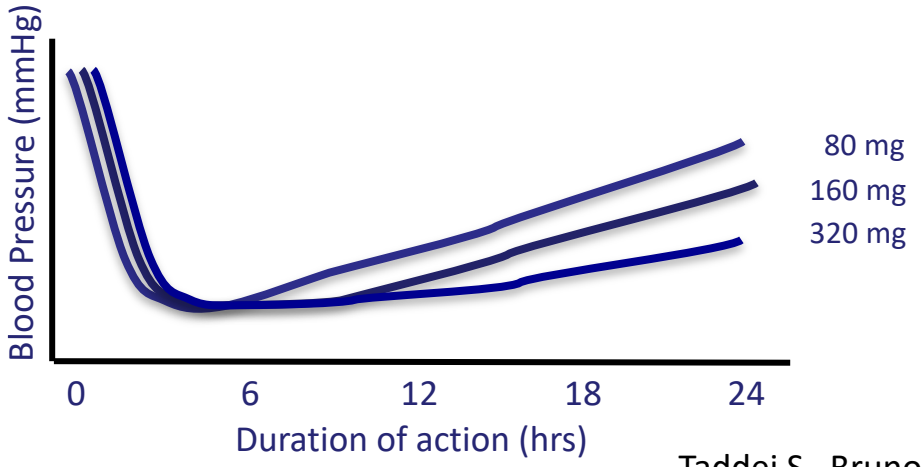
The correct administration of antihypertensive drugs according to the principles of clinical pharmacology

Dose-response curves of antihypertensive drugs







Taddei S , Bruno RM, Ghiadoni L. *Am J Cardiovasc Drugs* 2011

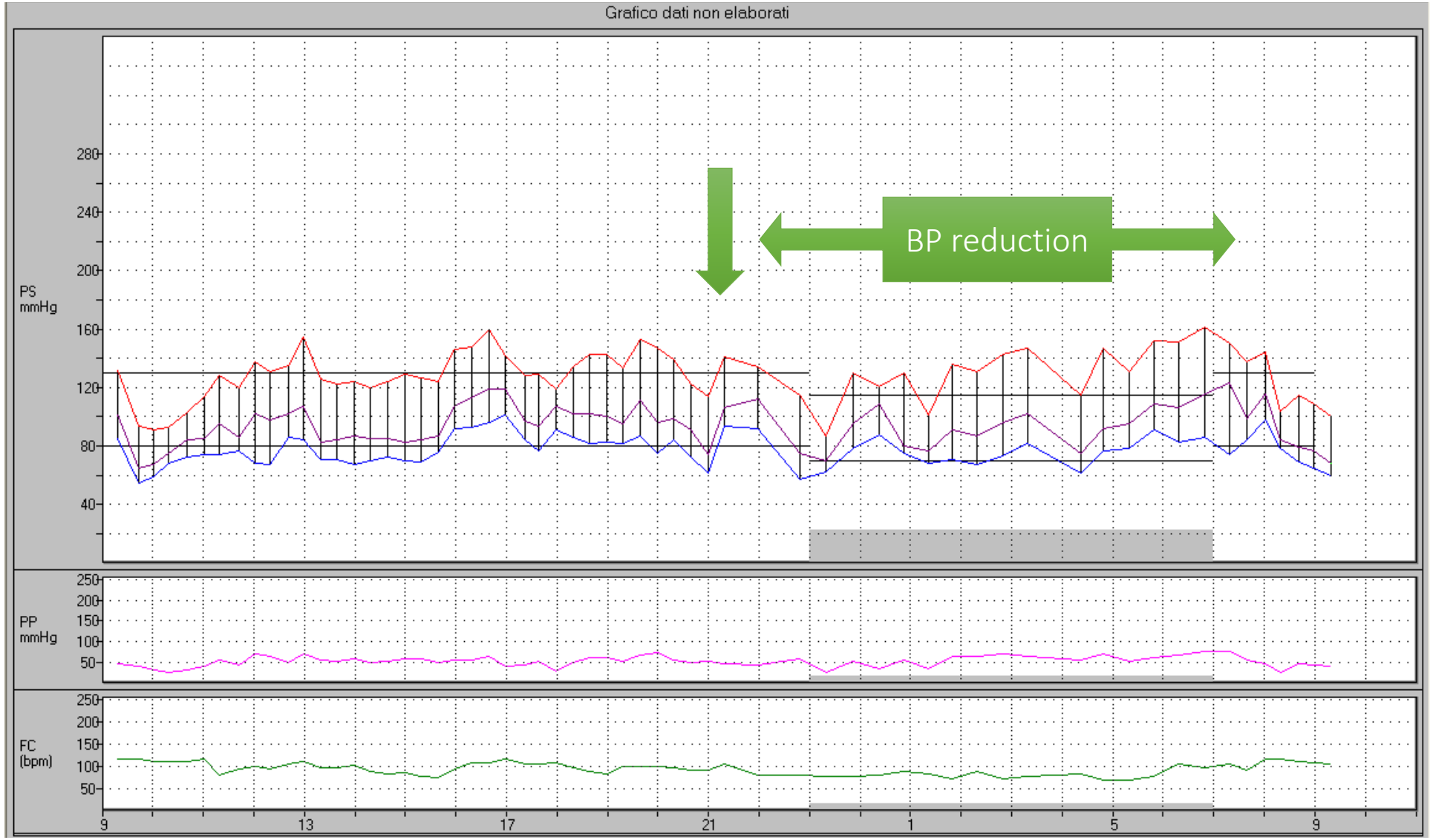


Grafico dati non elaborati
BP reduction
PS
mmHg
280
240
200
160
120
80
40
PP
mmHg
250
200
150
100
50
FC
(bpm)
250
200
150
100
50
9
13
17
21
1
5
9

Emergency Care Journal is the official Journal of the Academy of Emergency Medicine and Care (AcEMC). The journal is an international, peer-reviewed journal dedicated to improve the quality of care by publishing contributions on acute medical care and related medical specialties.

Reference Journal for the Italian Multidisciplinary Working Group on Syncope (GIMSI)

Editor-in-Chief
Lorenzo Ghiadoni

Journal Founder and Senior Editor
Ivo Casagranda

Emergency Care Journal has been accepted for Scopus!

23-01-2023

The Emergency Care Journal has been accepted to coverage for Scopus!

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2018 ESC Guidelines for the diagnosis and management of syncope

The Task Force for the diagnosis and management of syncope of the European Society of Cardiology (ESC)

Favour initial management in ED observation unit and/or fast-track to syncope unit	Favour admission to hospital
High-risk features AND: • Stable, known structural heart disease • Severe chronic disease • Syncope during exertion • Syncope while supine or sitting • Syncope without prodrome • Palpitations at the time of syncope • Inadequate sinus bradycardia or sinoatrial block • Suspected device malfunction or inappropriate intervention • Pre-excited QRS complex • SVT or paroxysmal atrial fibrillation • ECG suggesting an inheritable arrhythmogenic disorders • ECG suggesting ARVC	**High-risk features AND:** • Any potentially severe coexisting disease that requires admission • Injury caused by syncope • Need of further urgent evaluation and treatment if it cannot be achieved in another way (i.e. observation unit), e.g. ECG monitoring, echocardiography, stress test, electrophysiological study, angiography, device malfunction, etc. • Need for treatment of syncope