PLACE

PLATFORM OF LABORATORIES FOR ADVANCES IN CARDIAC EXPERIENCE

ROMA
Centro Congressi
di Confindustria
Auditorium
della Tecnica

9ª Edizione

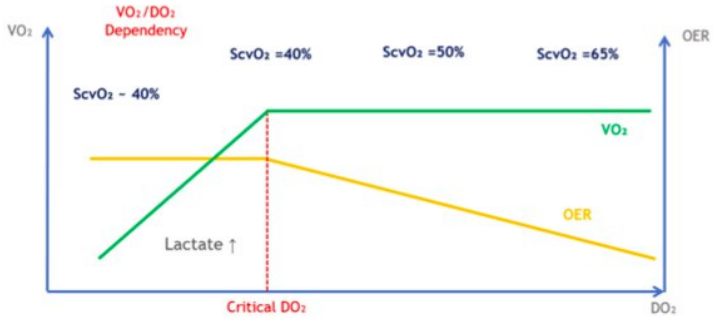
30 Settembre
1 Ottobre
2022

Ten minute answer in cardiologia d'urgenza

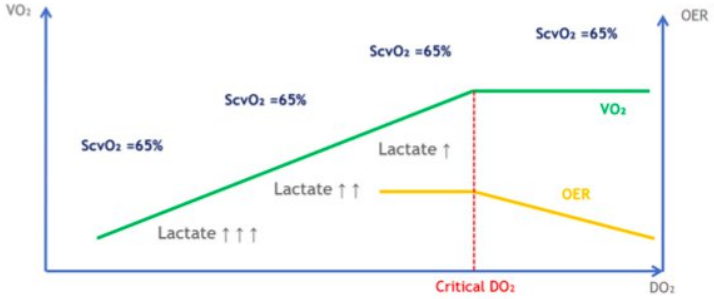
SHOCK AL DEA: DIAGNOSI DIFFERENZIALE, TERAPIA E GESTIONE PRIMA DELLA TERAPIA INTENSIVA

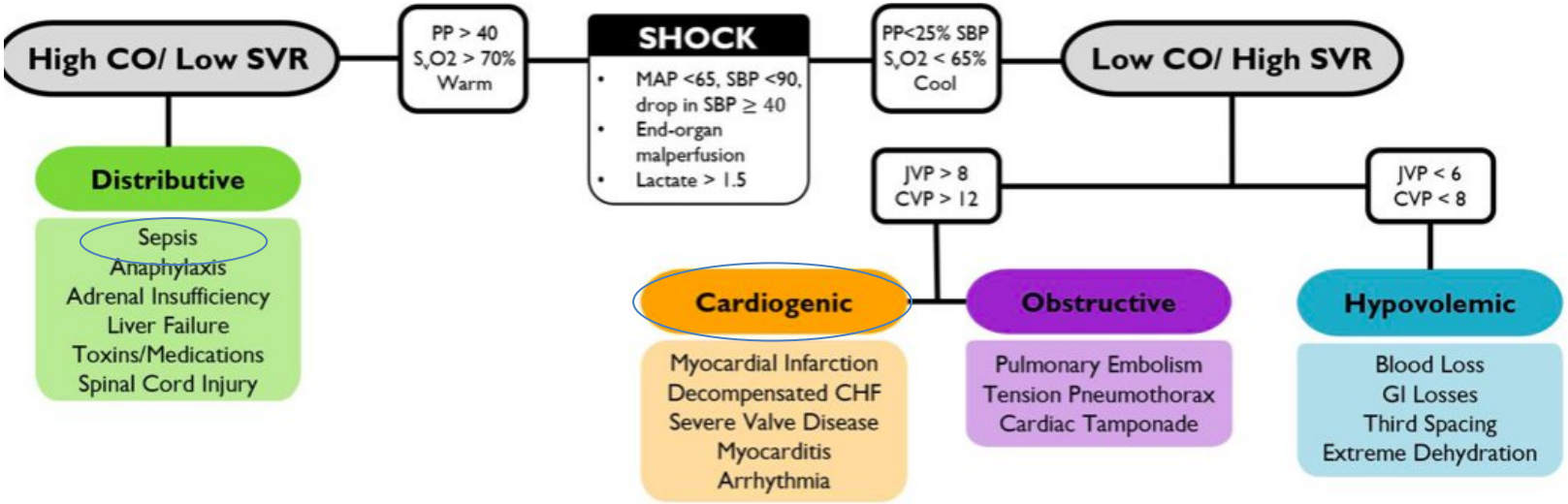
Dottoressa Oliviero Giada

Non septic shock patient



Septic shock patient




High CO/ Low SVR
PP > 40
SvO2 > 70%
Warm
SHOCK
MAP <65, SBP <90, drop in SBP ≥ 40
End-organ malperfusion
Lactate > 1.5
PP<25% SBP
SvO2 < 65%
Cool
Low CO/ High SVR
Distributive
Sepsis
Anaphylaxis
Adrenal Insufficiency
Liver Failure
Toxins/Medications
Spinal Cord Injury
JVP > 8
CVP > 12
JVP < 6
CVP < 8
Cardiogenic
Obstructive
Hypovolemic
Myocardial Infarction
Decompensated CHF
Severe Valve Disease
Myocarditis
Arrhythmia
Pulmonary Embolism
Tension Pneumothorax
Cardiac Tamponade
Blood Loss
GI Losses
Third Spacing
Extreme Dehydration

Sospetto clinico ☾ Identificazione pazienti ☾ Rivalutazione

- Ipotensione
- Tachicardia
- Tachipnea

- Anomalie stato mentale
- Cute pallida e fredda
- Oligo/anuria

} Ipoperfusione

Shock circolatorio acuto

PVC, ScVO2

CVC

Val.Clinica

Ecocardiogramma

Catetere arterioso

PaO2,SaO2, PaCo2,lact.

ARDS severa/disf. dx

Catetere polmonare

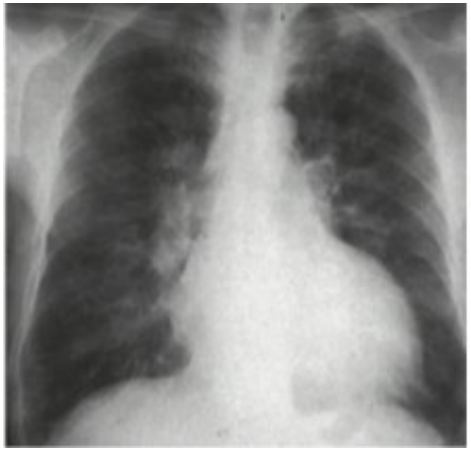
Funzionalità epatica e renale

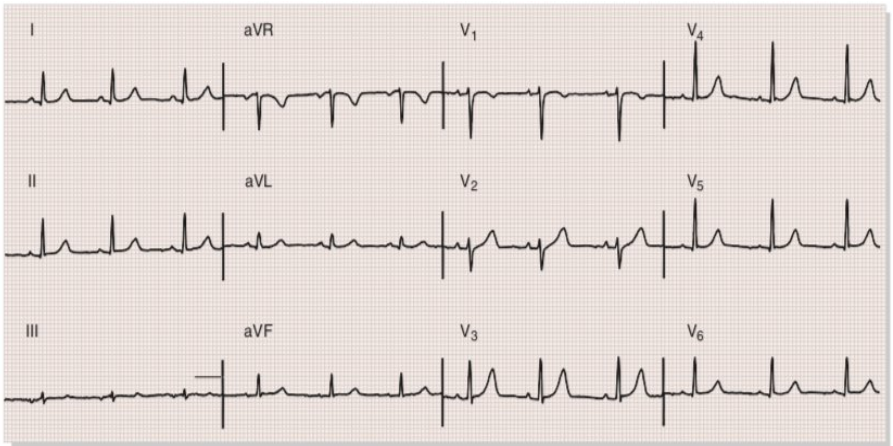
Enzimi cardiaci e peptidi natriuretici

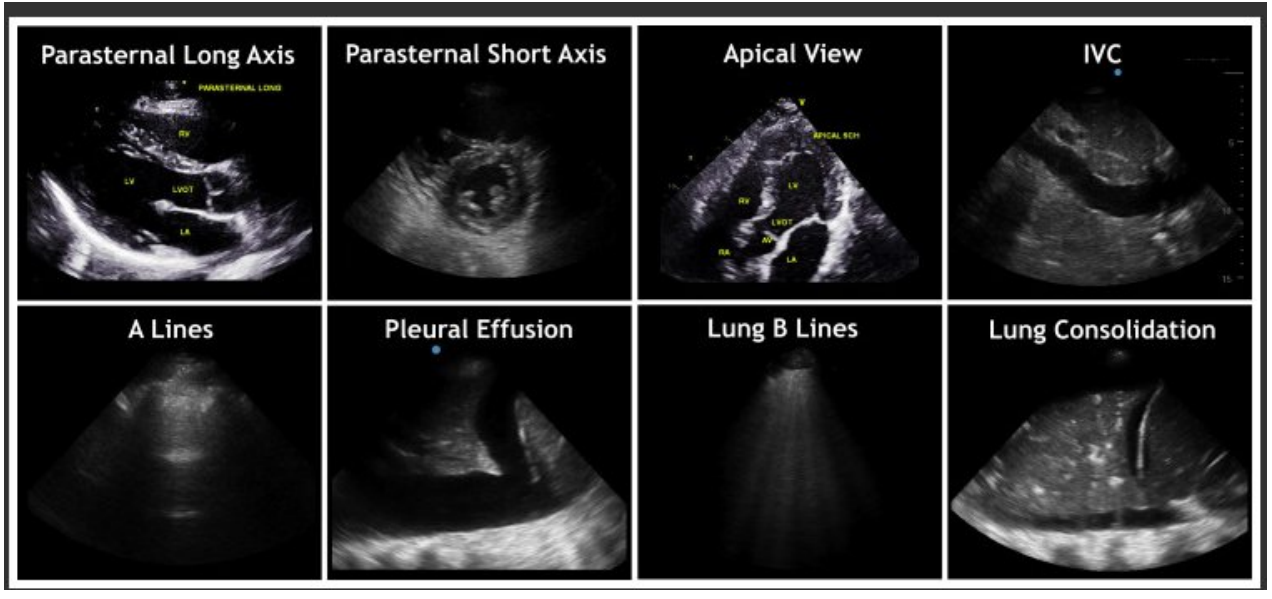
Emocromo e formula leucocitaria

Assetto completo della coagulazione

Emogas analisi





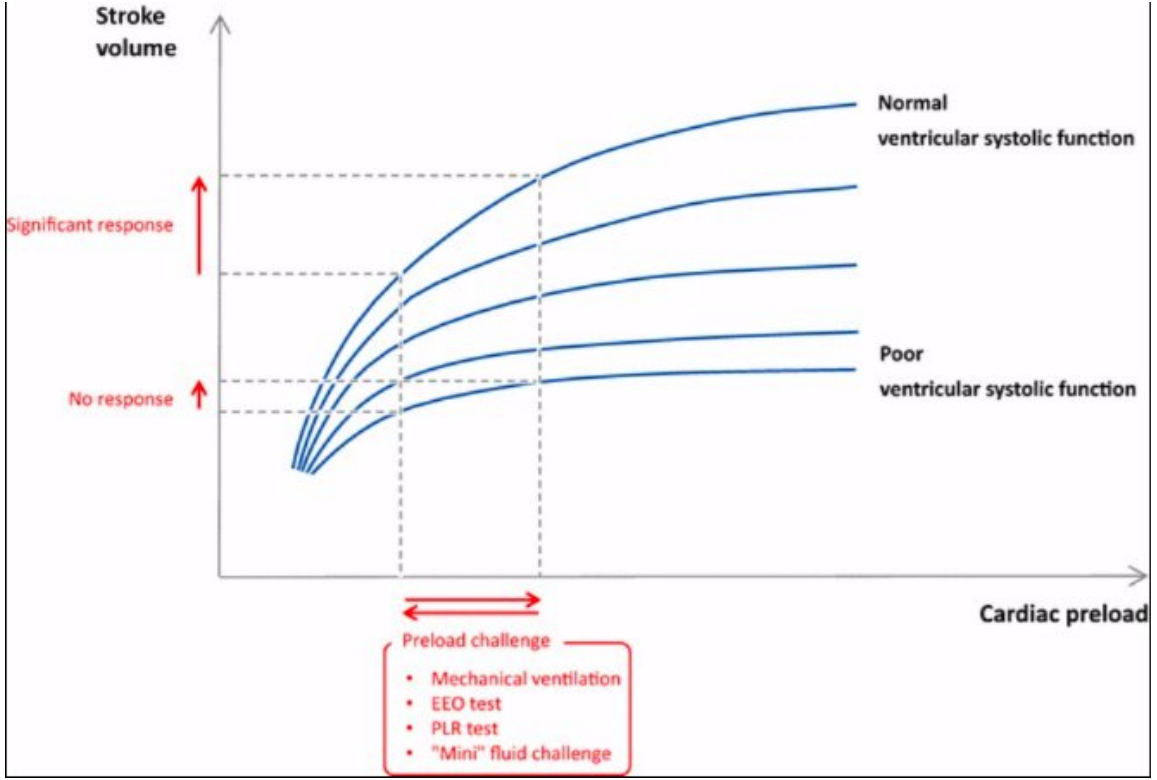

Parasternal Long Axis
Parasternal Short Axis
Apical View
IVC
A Lines
Pleural Effusion
Lung B Lines
Lung Consolidation

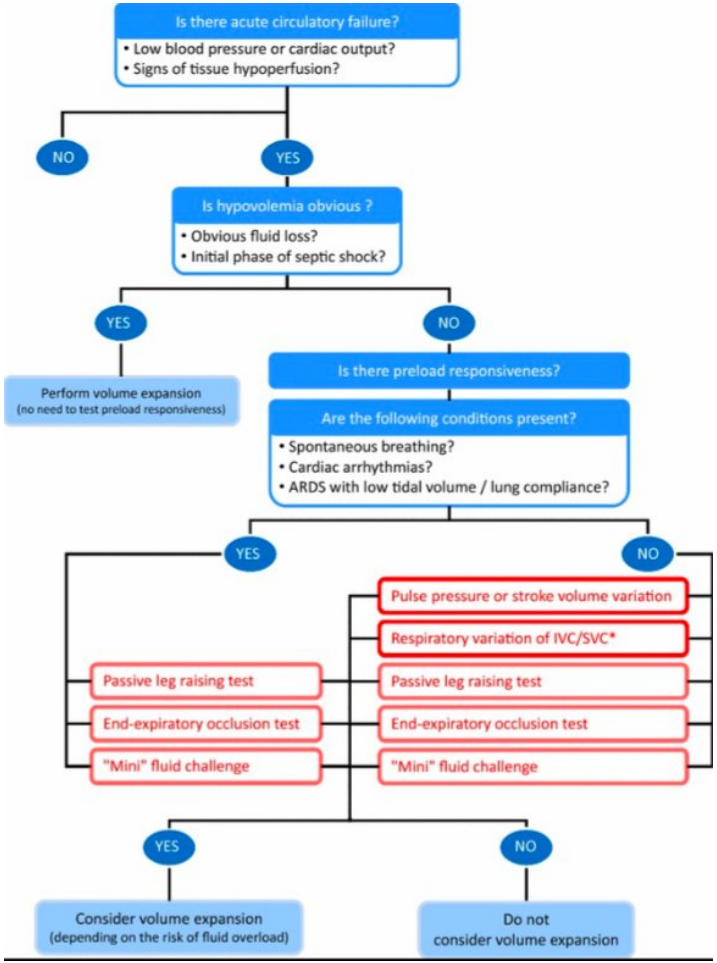
CONFERENCE REPORTS AND EXPERT PANEL

Less invasive hemodynamic monitoring in critically ill patients

Jean-Louis Teboul[1*], Bernd Saugel[2], Maurizio Cecconi[3], Daniel De Backer[4], Christoph K. Hofer[5], Xavier Monnet[1], Azriel Perel[6], Michael R. Pinsky[7], Daniel A. Reuter[2], Andrew Rhodes[3], Pierre Squara[8], Jean-Louis Vincent[9] and Thomas W. Scheeren[10]

Il concetto di fluid reponsivness





Misure statiche: PVC, Wedge

Misure dinamiche:
PPV, SVV cut off 12% (zona grigia tra 9 e 12)

Variazioni respiratorie (VAM) VCI e VCS

Passive Leg raising ☾ aumento SV/CO del 12%

Test occlusione tele espiratorio ☾ VTI e Vmax aumento 9%

Fluid challenge (250 cc) aumento SV/CO>15%
mini fluid challenge (100 cc) con cut of SV/CO di 10-15%

1) Ecocardiogramma
   - Stima stroke volume, LVEF, Pressioni di riempimento (E/e', E/A, E'), funzione VDx

2) PAC
   - RAP, PAP, Wedge, CO (metodi termodiluizione)
   - SvO2, PvCo2

3) Metodi che usano analisi arterial pulse contour

Calibrati: metodi termodiluizione transpolmonare (CO, vol telediastolico v sx, cardiac function index, global ejection fraction, extravascular lung water, pulmonary vascular permeabiliti index), metodi diluizione litio

Non calibrati: in setting post operatorio

4) ETE
   - Variazione flusso in aorta discendente

Goal terapeutici precoci →

Concetto del delta lattato

SVcO2-diff a-v

PAM

Gradiente di perfusione

ABC+ fluidi+inotropi/vasopressori+terapia eziologica

Contents lists available at ScienceDirect

American Journal of Emergency Medicine

journal homepage: www.elsevier.com/locate/ajem

Identifying cardiogenic shock in the emergency department

Madison Daly [a], Brit Long [b], Alex Koyfman [c], Skyler Lentz [d,*]

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[b] SAUSHEC, Emergency Medicine, Brooke Army Medical Center, United States of America
[c] The University of Texas Southwestern Medical Center, Department of Emergency Medicine, United States of America
[d] Division of Emergency Medicine, Department of Surgery, The University of Vermont Larner College of Medicine, United States of America

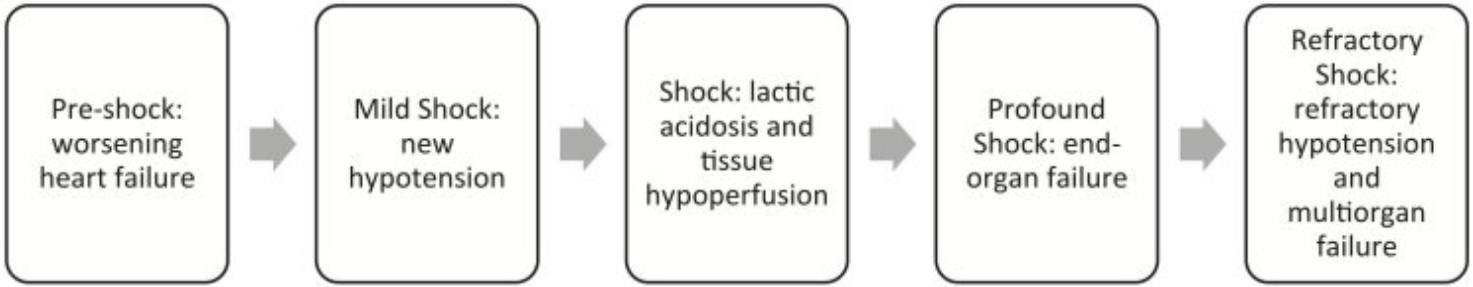


Fig. 1. A representation of the continuum of cardiogenic shock [3]. This spectrum may deviate with secondary insults (e.g. new arrhythmias).

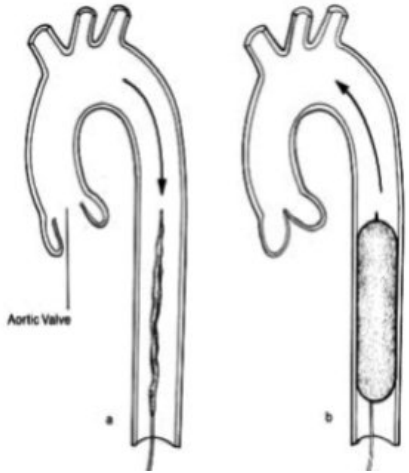
Cochrane Library

Cochrane Database of Systematic Reviews

Inotropic agents and vasodilator strategies for the treatment of cardiogenic shock or low cardiac output syndrome (Review)

Uhlig K, Efremov L, Tongers J, Frantz S, Mikolajczyk R, Sedding D, Schumann J

IABP



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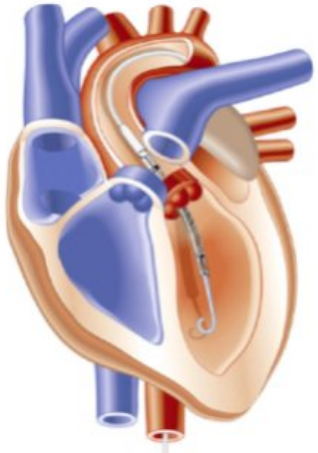
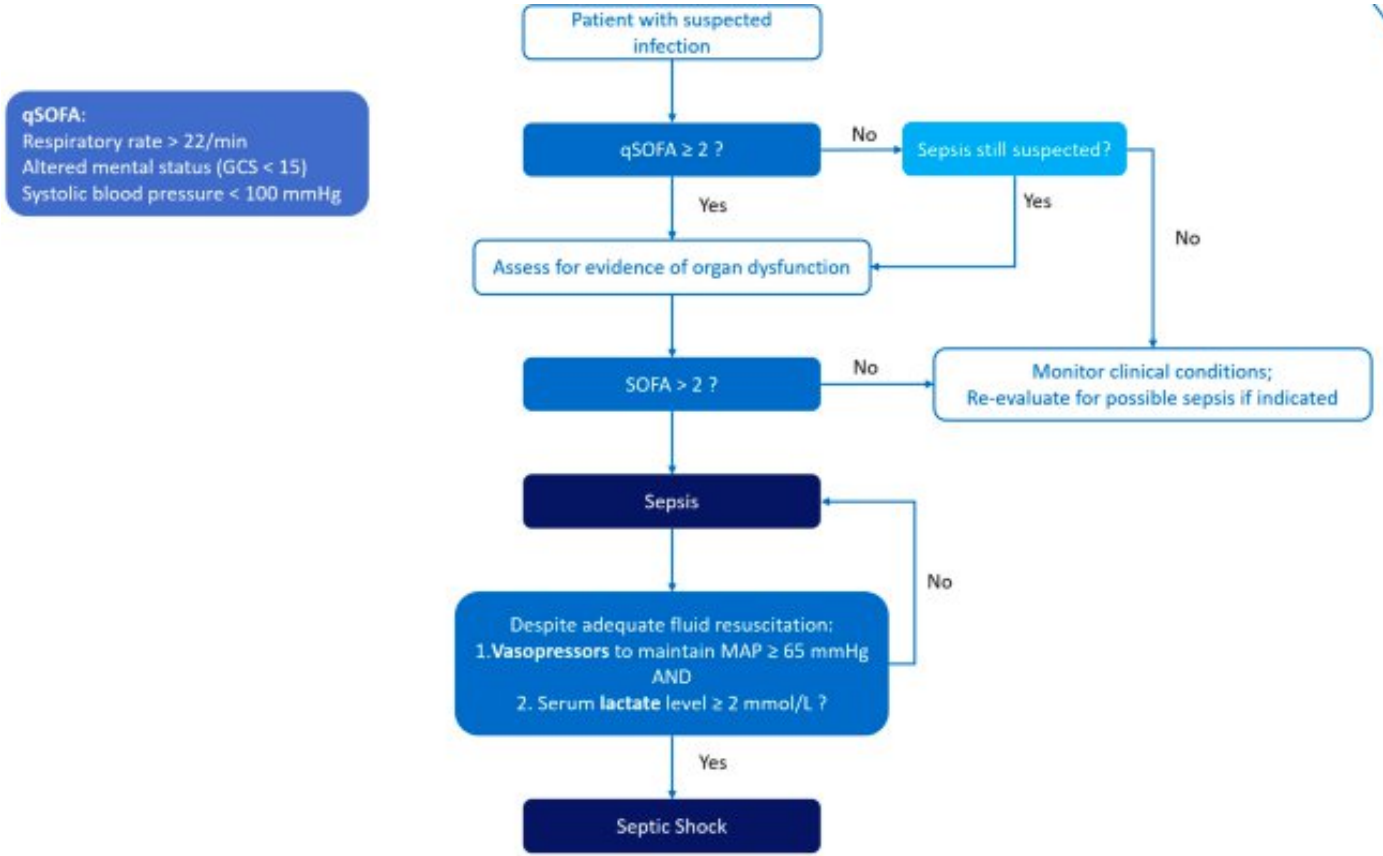


ECMO

GUIDELINES

Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021

Laura Evans[1*], Andrew Rhodes[2], Waleed Alhazzani[3], Massimo Antonelli[4], Craig M. Coopersmith[5], Craig French[6], Flávia R. Machado[7], Lauralyn Mcintyre[8], Marlies Ostermann[9], Hallie C. Prescott[10], Christa Schorr[11], Steven Simpson[12], W. Joost Wiersinga[13], Fayez Alshamsi[14], Derek C. Angus[15], Yaseen Arabi[16], Luciano Azevedo[17], Richard Beale[9], Gregory Beilman[18], Emilie Belley-Cote[19], Lisa Burry[20], Maurizio Cecconi[21,22], John Centofanti[23], Angel Coz Yataco[24], Jan De Waele[25], R. Phillip Dellinger[11], Kent Doi[26], Bin Du[27], Elisa Estenssoro[28], Ricard Ferrer[29], Charles Gomersall[30], Carol Hodgson[31], Morten Hylander Møller[32], Theodore Iwashyna[33], Shevin Jacob[34], Ruth Kleinpell[35], Michael Klompas[36,37], Younsuck Koh[38], Anand Kumar[39], Arthur Kwizera[40], Suzana Lobo[41], Henry Masur[42], Steven McGloughlin[43], Sangeeta Mehta[44], Yatin Mehta[45], Mervyn Mer[46], Mark Nunnally[47], Simon Oczkowski[3], Tiffany Osborn[48], Elizabeth Papathanassoglou[49], Anders Perner[50], Michael Puskarich[51], Jason Roberts[52,53,54,55], William Schweickert[56], Maureen Seckel[57], Jonathan Sevransky[5], Charles L. Sprung[58,59], Tobias Welte[60], Janice Zimmerman[61] and Mitchell Levy[62]


qSOFA:
Respiratory rate > 22/min
Altered mental status (GCS < 15)
Systolic blood pressure < 100 mmHg
Patient with suspected infection
qSOFA ≥ 2 ?
No
Sepsis still suspected?
Yes
Yes
No
Assess for evidence of organ dysfunction
SOFA > 2 ?
No
Monitor clinical conditions;
Re-evaluate for possible sepsis if indicated
Sepsis
No
Despite adequate fluid resuscitation:
1. Vasopressors to maintain MAP ≥ 65 mmHg
AND
2. Serum lactate level ≥ 2 mmol/L ?
Yes
Septic Shock

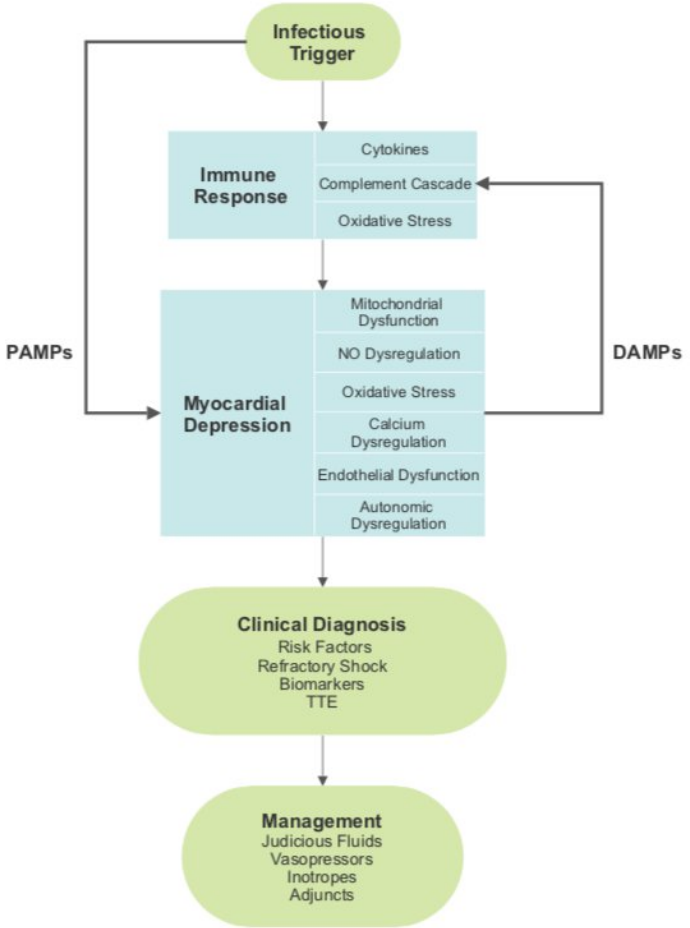
Dubbi sui caposaldi terapeutici:

I fluidi a tutti i pazienti? Quali Fluidi e a che dosaggio?

Quale vasopressore, quale dosaggio e quando iniziarlo? E se non basta?

Quale antibiotico, quando e a quale dose di carico?

Ed i corticosteroidi?



Cardiomiopatia settica tra il 40-60%

Deriva da processo infettivo+alterata perfusione cardiaca+danno polmonare

Prima linea espansione volemica e somministrazione precoce vasopressore ☾ può smascherare il coinvolgimento cardiaco

20% disfunzione esclusivamente diastolica

Usare principalmente Dobutamina o levosimendan

Take Home messages:

1. Tempo dipendente
2. Identificazione del Paziente a rischio
3. Rivalutazione continua nel tempo
4. Sforzo diagnostico e terapeutico parallelo
5. Applicare il concetto di fluid responsivness
6. Fenotipizzare il soggetto da un punto di vista emodinamico