Le quattro cose che bisogna SAPER fare

Enrico Mirante - Pronto Soccorso, Osservazione Intensiva e Medicina d'Urgenza, Ospedale Dono Svizzero, Formia

FIMEUC

SIMEU

“Il medico d’Emergenza-Urgenza deve possedere conoscenze teoriche, scientifiche e professionali nei campi della metodologia clinica, del primo inquadramento diagnostico e del primo trattamento delle ***urgenze mediche, chirurgiche e traumatologiche*** *[…]”*

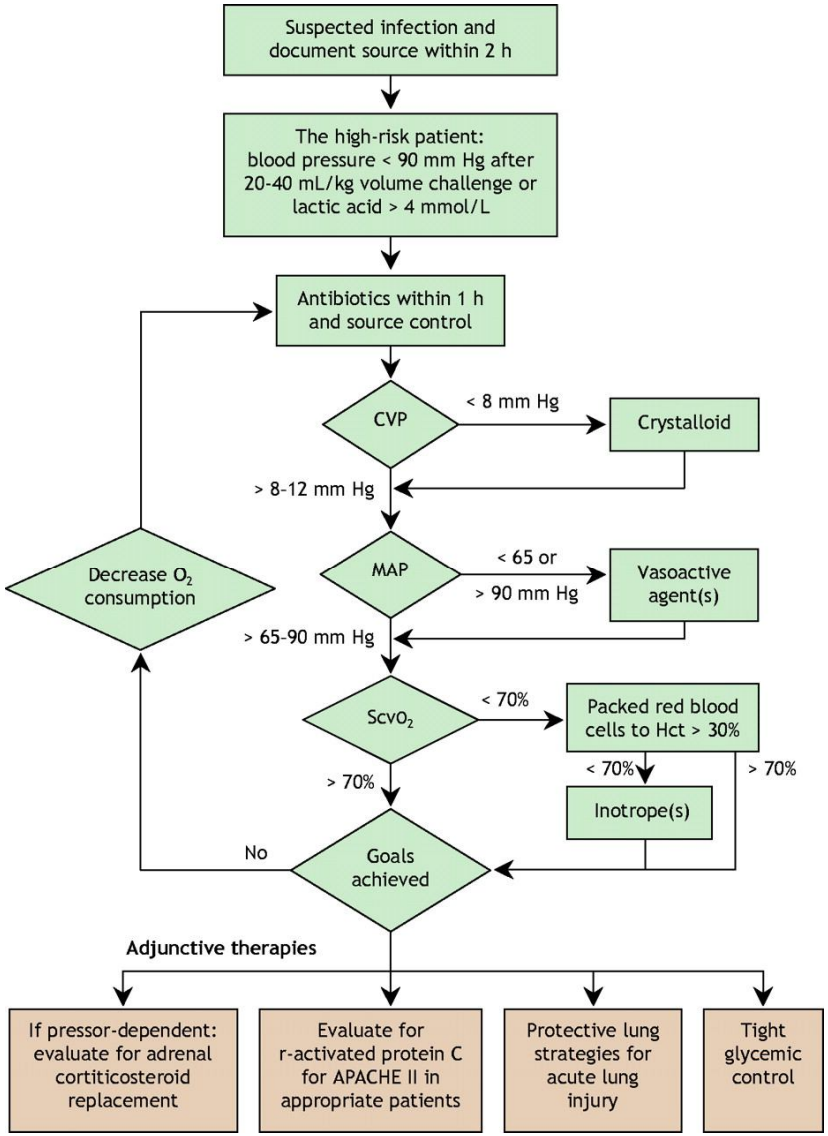
Valutare, rianimare e stabilizzare *il paziente* ***in fase intra ed extra-ospedaliera***

Inquadrare dal punto di vista ***diagnostico*** *e attuare il* ***trattamento*** *di tutti i pazienti,* ***inclusi i pazienti pediatrici, geriatrici ed in gravidanza****, che arrivano in Pronto Soccorso con diversi sintomi e bisogni in base a criteri di priorità.*

Arresto cardiaco

Ritmo Defibrillabile (FV)

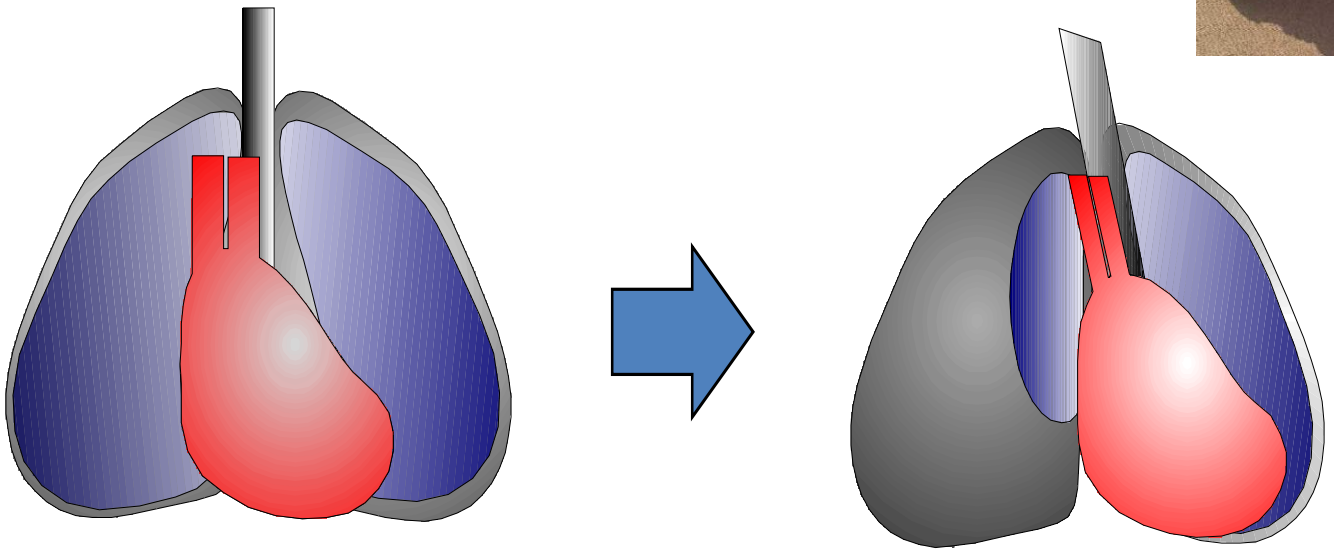
Fig. 5: Treatment options in sepsis



Rivers, E. P. et al. CMAJ 2005;173:1054-1065

La causa più frequente di shock nel trauma è *l'emorragia*

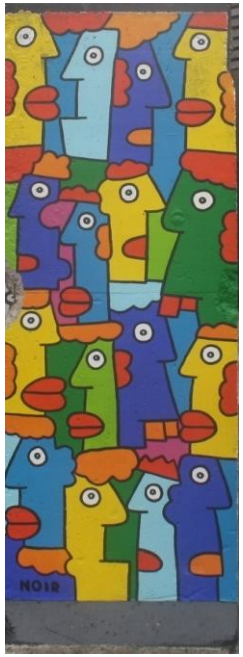
IL PNEUMOTORACE IPERTESO
CONDUCE RAPIDAMENTE A MORTE



ATLS
PRIMARY SURVEY

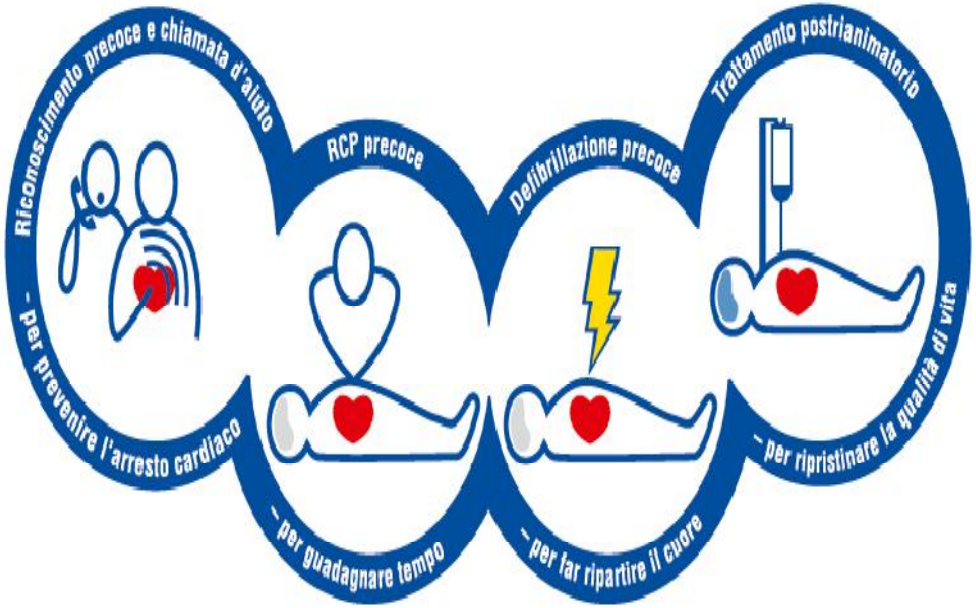
A
B
C
D
E

1?



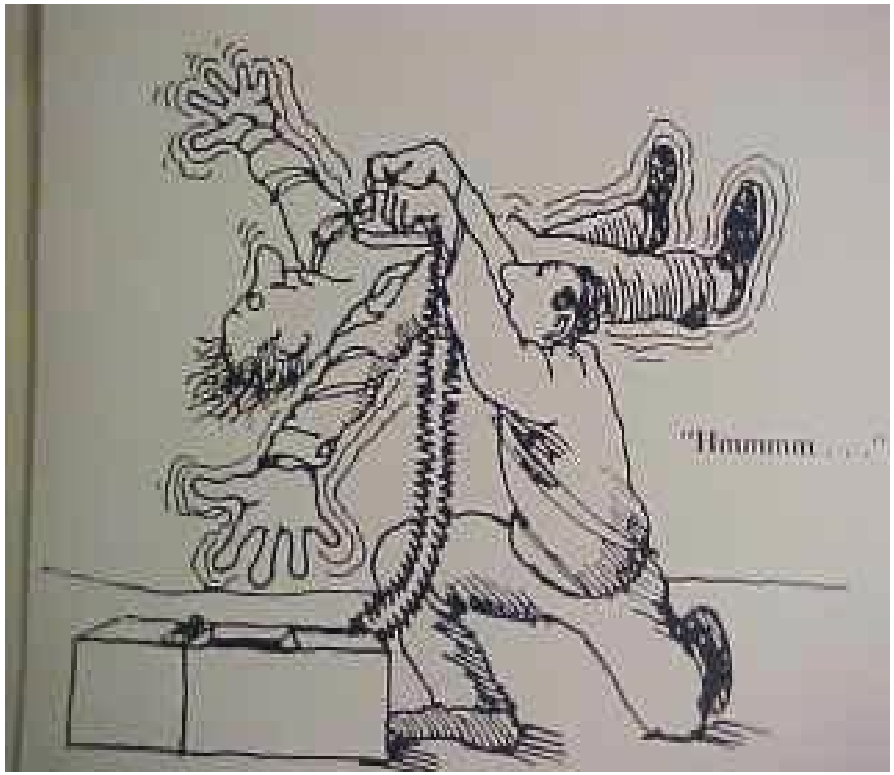
AGIRE PER PRIORITA'

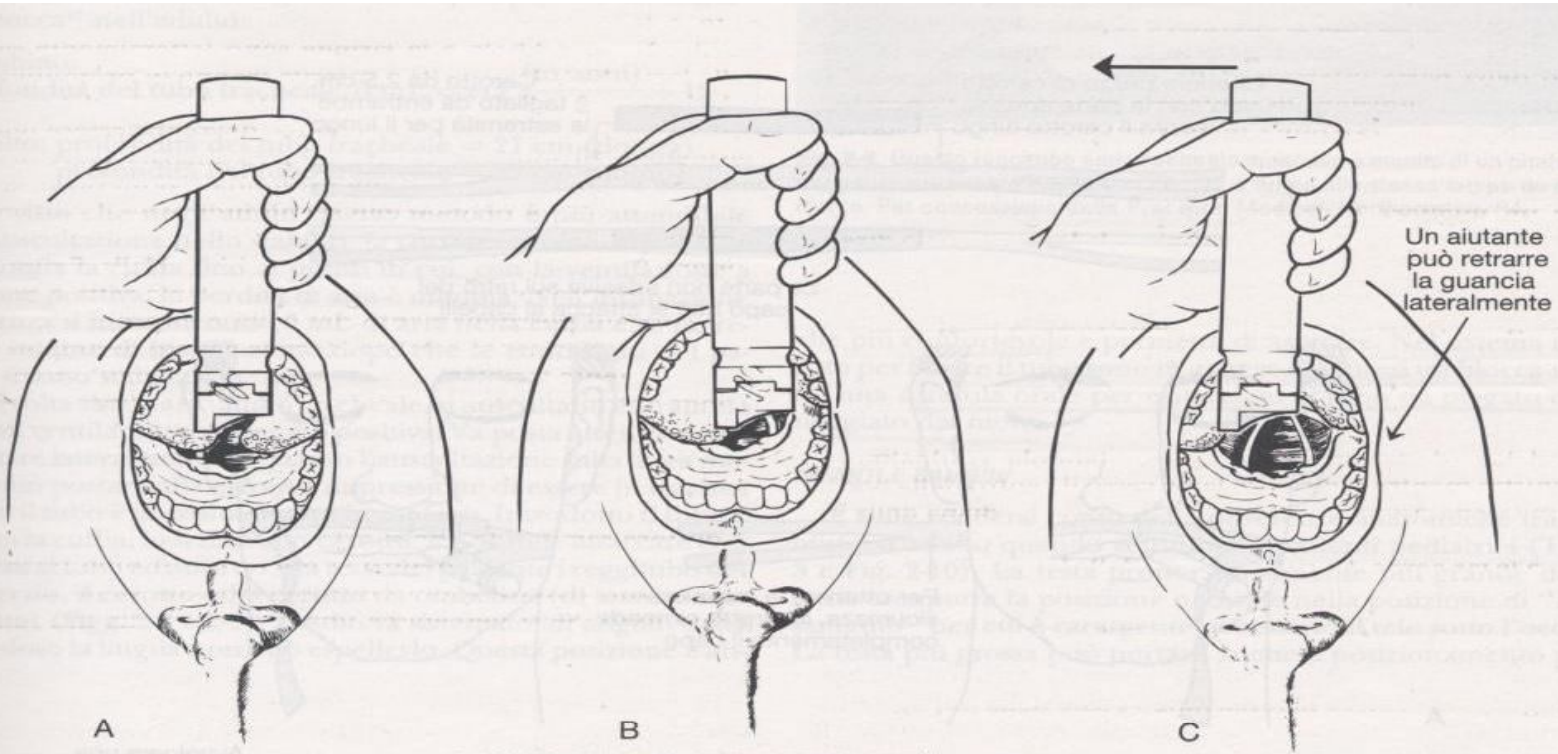
ROSSO
GIALLO
VERDE
BIANCO



A B C D E

1! PROCEDURE SALVAVITA





LA TRAZIONE SUL LARINGOSCOPIO È DIRETTA
NEL SENSO DELLA PARETE OPPOSTA E DEL SOFFITTO

ANATOMIA

L’intubazione deve essere preceduta da pre-ossigenazione!

Anche se l’intubazione presenta vantaggi,l’obiettivo non è l’intubazione ma:

- il mantenimento della pervietà delle vie aeree
- la ossigenazione

Non ostinarsi in ripetuti tentativi di intubazione!

Ventilazione con pallone autoespansibile e maschera

endotub1 www.fotosearch.it

2!

Valutazione diagnostica

CON GLI STRUMENTI CHE ABBIAMO A DISPOSIZIONE!!

- ECG
- EGA
- Rx torace
- Esami ematochimici

Diagnostica - EGA

ARTERIA

pH: 7.36- 7.44

pCO2: 38-42 mmhg

HCO3: 23-25 mEq/l

pO2: variabile

SaO2: variabile (pO2, pH, pCO2, TC...)

VENA

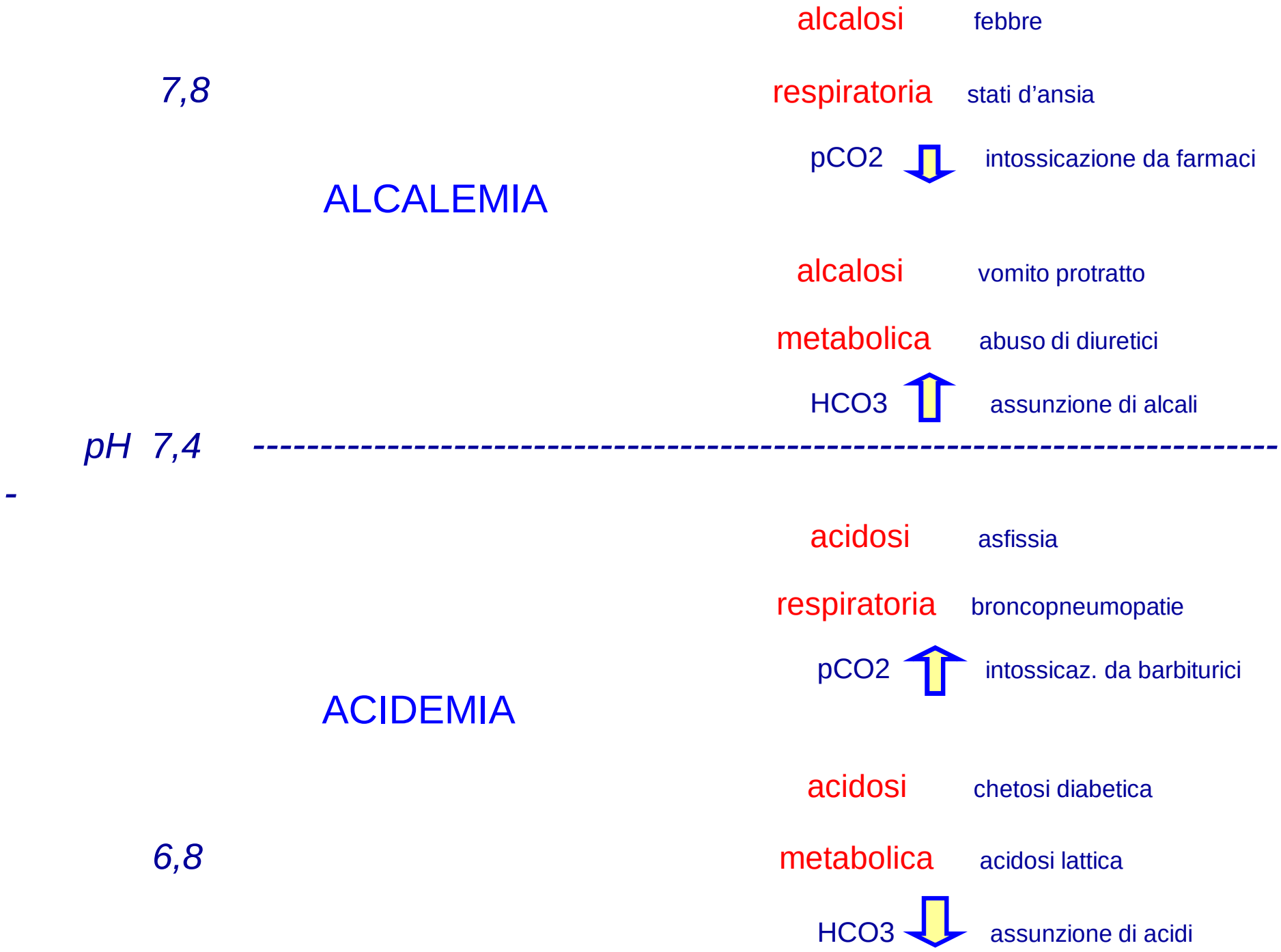
pH: 7.32- 7.40

pCO2: 43-47 mmhg

HCO3: 25-27 mEq/l

pO2: < 51

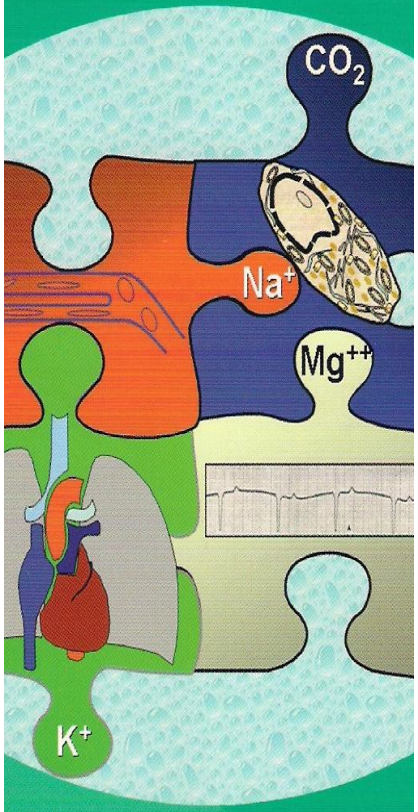
SO2: < 75


alcalosi
febbre
7,8
respiratoria
stati d'ansia
pCO2
intossicazione da farmaci
ALCALEMIA
alcalosi
vomito protratto
metabolica
abuso di diuretici
HCO3
assunzione di alcali
pH 7,4
acidosi
asfissia
respiratoria
broncopneumopatie
pCO2
intossicaz. da barbiturici
ACIDEMIA
acidosi
chetosi diabetica
6,8
metabolica
acidosi lattica
HCO3
assunzione di acidi

Italian Resuscitation Council

IRC

Emogasanalisi, fluidi ed elettroliti



di Fulvio Kette, Fernando Schiraldi

Disturbo primario		Compenso atteso	
Acidosi respiratoria	Acuta	↑ 10 CO_2	↑ 1 HCO_3^-
Cronica	↑ 10 CO_2	↑ 3.5 HCO_3^-	
Alcalosi respiratoria	Acuta	↓ 10 CO_2	↓ 2 HCO_3^-
Cronica	↓ 10 CO_2	↓ 4 HCO_3^-	
Acidosi metabolica		↓1 HCO_3^-	↓ 1.2 CO_2
Alcalosi metabolica		↑1 HCO_3^-	↑ 0.5 CO_2

Disturbo acido-base	pH	$PaCO_2$	HCO_3^-
Acidosi respiratoria	↓	↑	
Acidosi metabolica	↓		↓
Alcalosi respiratoria	↑	↓	
Alcalosi metabolica	↑		↑
Acidosi respiratoria con compenso renale	↓*	↑	↑
Acidosi metabolica con compenso respiratorio	↓*	↓	↓
Alcalosi respiratoria con compenso renale	↑*	↓	↓
Alcalosi metabolica con compenso respiratorio	↑*	↑	↑
Acidosi metabolica e respiratoria mista	↓	↑	↓
Alcalosi metabolica e respiratoria mista	↑	↓	↑

- **pH sempre concordante con il disturbo primario**
- **a pH normale, sospettare un disordine misto**
- **disordini dello stesso senso = grave alterazione di pH**

RADIOMETER SERIE ABL 700

ABL725 Laborario Analisi P.O. Formia 10:35:00 2011-02-18
REFERTO PAZIENTE Siringa - S 195uL Campione # 16043

Identificazioni

Reparto	PS
Cognome Paziente	
Nome Paziente	
Tipo campione	Arterioso
temp	37,0 °C

Valori Gas Ematici

↓	pH	7,293		[7,340 - 7,450]
↑	pCO_2	55,8	mmHg	[32,0 - 45,0]
	pO_2	108	mmHg	[70,0 - 116]

Valori Ossimetrici

↓	$ctHb$	11,8	g/dL	[12,0 - 17,5]
	sO_2	97,2	%	[95,0 - 99,0]
	FO_2Hb	94,9	%	[94,0 - 98,0]
↑	$FCOHb$	1,8	%	[0,0 - 0,8]
	$FHHb$	2,7	%	[ ]
	$FMetHb$	0,6	%	[0,1 - 0,6]

Valori Elettroliti

↑	cK^+	5,7	mmol/L	[3,5 - 5,0]
↓	cNa^+	131	mmol/L	[136 - 146]
↓	cCa^{2+}	1,09	mmol/L	[1,15 - 1,29]
↓	cCl^-	98	mmol/L	[98 - 106]

Valori Metaboliti

↑	$cGlu$	126	mg/dL	[70 - 105]
↑	$cLac$	2,9	mmol/L	[0,5 - 1,6]

Valori Corretti con la Temperatura

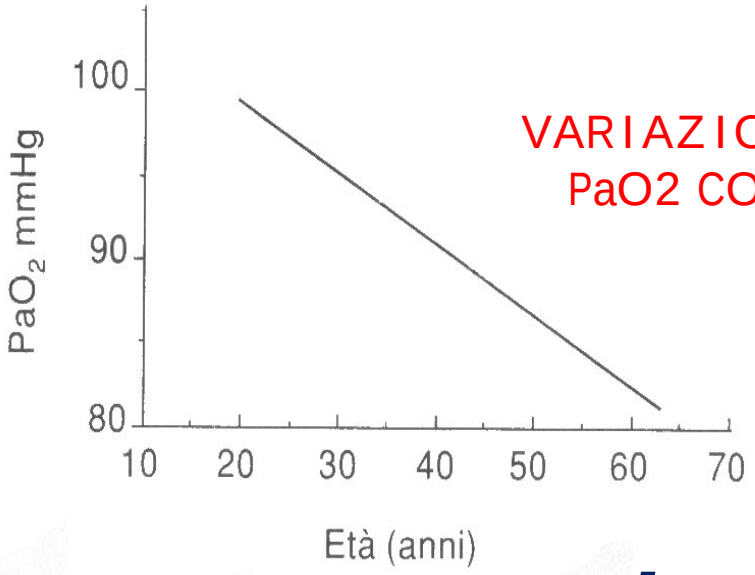
	pH(T)	7,293	
	$pCO_2(T)$	55,8	mmHg
	$pO_2(T)$	108	mmHg

Stato di Ossigenazione

ctO_{2c}	15,9	Vol%
$p50_e$	29,51	mmHg

Stato Acido Base

$cBase(Ecf)_c$	0,4	mmol/L
$cHCO_3^-(P,st)_c$	23,9	mmol/L



VARIAZIONI DELLA
PaO2 CON L'ETA'

P/F (PaO2/FiO2)

P/F > 400	Scambio gassoso nella norma
400-300	alterato
300-200	molto alterato
< 200	gravemente alterato

Δ (A-a)O2= PAO2-PaO2
[(Patm-Ph2O)x FiO2 – PaCO2/R] – PaO2
[(760-47) x FiO2 – PaCO2/R] – PaO2
V.N. 10-15

RADIOMETER SERIE ABL 700

ABL725 Laborario Analisi P.O. Formia 10:35:00 2011-02-18
REFERTO PAZIENTE Siringa - S 195uL Campione # 16043

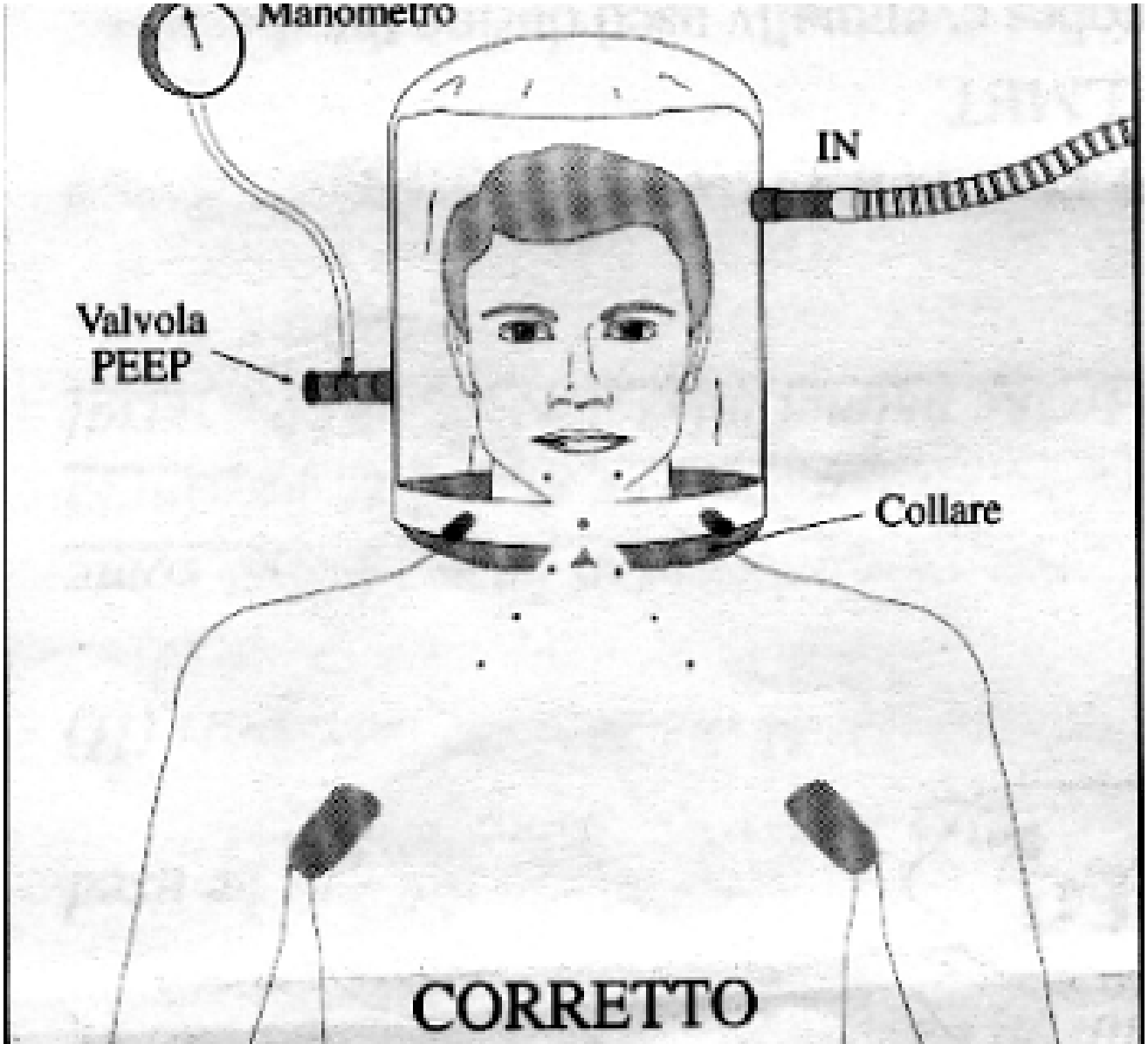
Identificazioni

Reparto	PS
Cognome Paziente	
Nome Paziente	
Tipo campione	Arterioso
temp	37,0 °C

FiO2 : 0,40%
FR: 30/min

Valori Gas Ematici				
↓	pH	7,293		[7,340 - 7,450]
↑	pCO_2	55,8	mmHg	[32,0 - 45,0]
	pO_2	108	mmHg	[70,0 - 116]
Valori Ossimetrici				
↓	$ctHb$	11,8	g/dL	[12,0 - 17,5]
	sO_2	97,2	%	[95,0 - 99,0]
	FO_2Hb	94,9	%	[94,0 - 98,0]
↑	$FCOHb$	1,8	%	[0,0 - 0,8]
	$FHHb$	2,7	%	[ ]
	$FMetHb$	0,6	%	[0,1 - 0,6]
Valori Elettroliti				
↑	cK^+	5,7	mmol/L	[3,5 - 5,0]
↓	cNa^+	131	mmol/L	[136 - 146]
↓	cCa^{2+}	1,09	mmol/L	[1,15 - 1,29]
↓	cCl^-	98	mmol/L	[98 - 106]
Valori Metaboliti				
↑	$cGlu$	126	mg/dL	[70 - 105]
↑	$cLac$	2,9	mmol/L	[0,5 - 1,6]
Valori Corretti con la Temperatura				
	$pH(T)$	7,293		
	$pCO_2(T)$	55,8	mmHg	
	$pO_2(T)$	108	mmHg	
Stato di Ossigenazione				
	ctO_{2c}	15,9	Vol%	
	$p50_e$	29,51	mmHg	
Stato Acido Base				
	$cBase(Ecf)_c$	0,4	mmol/L	
	$cHCO_3^-(P,st)_c$	23,9	mmol/L	

CPAP a flusso continuo



- Sorgente di gas
- Via inspiratoria
- Via espiratoria
- Pallone reservoir
- Valvola Peep


Anamnesi + Esame Obiettivo

CLINICA vs EMODINAMICA

↓CO

- **Sensorio**
- **Cianosi fredda**
- **Oliguria**
- **Ipotensione**
- **Sudorazione**
- **Tachipnea**
- **III Tono**
- **……..**

↑ WEDGE

- ***Dispnea***
- ***Polmoni umidi***
- ***Ipossia***
- ***Giugulari turgide***
- ***IV Tono……..***

- **PVC e ScvO2**

2

Diagnostica - EGA

$ScvO_2$

Saturazione venosa centrale

- È la saturazione del sangue della vena cava o dell'atrio destro
- Rappresenta l'ossigenazione residua del sangue proveniente dai tessuti dopo l'estrazione di ossigeno
- E' un indice della relazione tra apporto di O_2 (DO_2) ed estrazione di O_2 (VO_2)
- V.n. > 70%

↑ CO2 tissutale

- Tonometria gastrica
- Capnografia sublinguale
- $\Delta (v_c - a) CO_2 > 5$ mmHg

↓ DO2

⇓

Ipossia tissutale globale

ScvO2 < 70%

↑ Lattati

Insufficienza Renale Acuta
Valutazione Diagnostica in Urgenza

ECG

EGA

RX Torace

Eco reni e vie urinarie

Laboratory Evaluation

- Creatinina
- Potassiemia
- BUN/Cr
- FE_{Na}
- Es. Urine

Volume status

3?

Corretto utilizzo dei farmaci

- Noradrenalina 0,1 – 2 γ/kg/min
- Dobutamina: 2.5 - 20 mcg/Kg/min

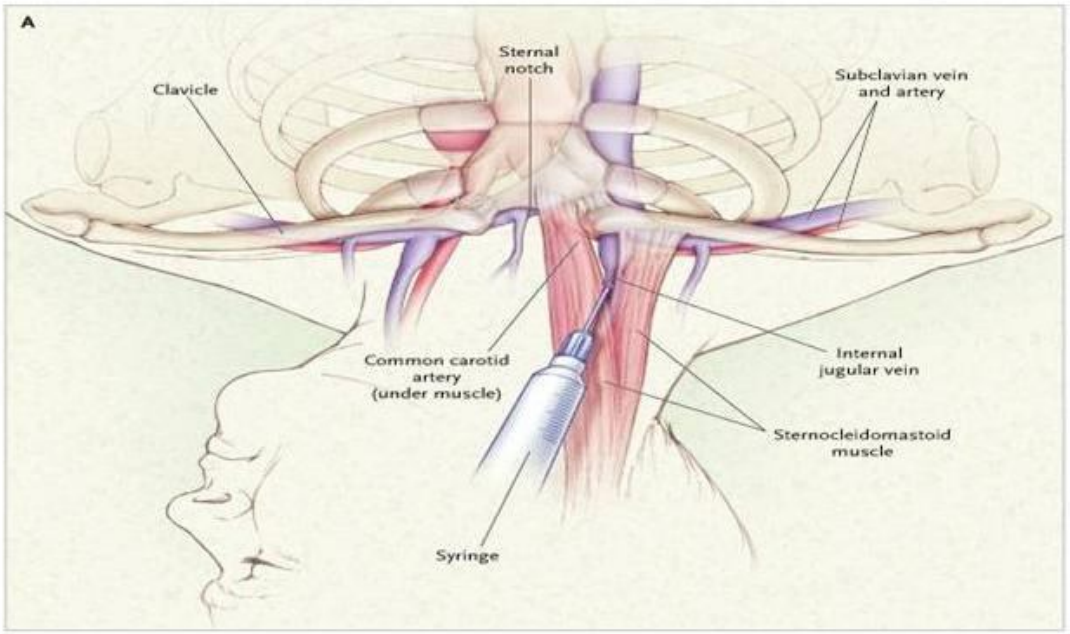
  Es.: Dobutrex 1 fl (250 mg) diluito in 250ml = 1000 mcg/ml
- Adrenalina
- Atropina
- Levosimendan: 1 flacone da 25 mg in 500 ml di Glucosio 5% in 24 ore
- PDE-I (Amrinone): 0,75 mg/Kg = 1ml/10 Kg e.v
- Dopamina: 1 fl (200 mg) in 200 ml di soluzione fisiologica = 1 mg/ml=1000mcg/ml

  6-10 mcg/Kg/min = prev. β-agonista, 10-20 mcg/K/min = prev.α-agonista
- Aggiustare i dosaggi sec. la Clearance

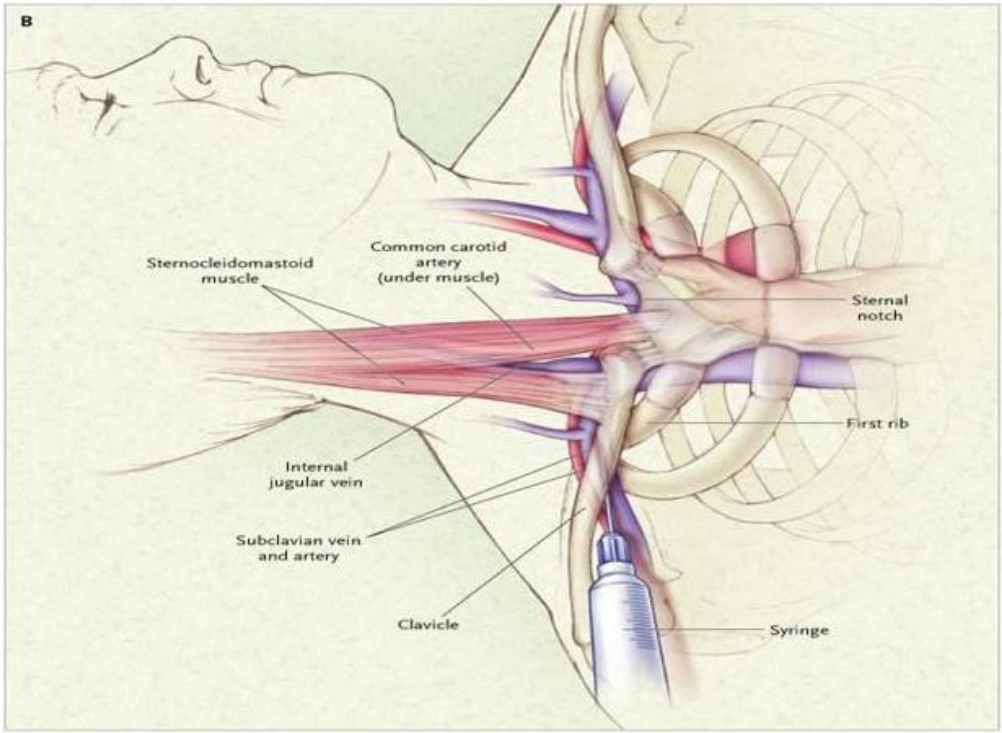
INFUSIONI IN POMPA!

3 ! Saper essere invasivi....
(QUANDO E SE NECESSARIO)

- **PVC e ScvO2**



The NEW ENGLAND JOURNAL of MEDICINE



Cosa serve per l'inserzione di un CVC?

LA STERILITA'!

Equipaggiamento necessario per l'inserzione di un catetere venoso centrale (CVC)

- Telini sterili, guanti sterili, camice sterile, cappellino e mascherina
- Garze sterili e soluzione antisettica
- Anestetico locale (lidocaina 2%)
- Catetere venoso centrale appropriato e set per l'introduzione
- Aghi e siringhe
- Soluzione salina o eparinata per il priming delle vie dopo l'inserzione
- Materiale per la sutura (ad es. Seta 2/0 montata su ago)
- Medicazioni sterili
- Rasoi per la rasatura della zona di inserzione
- Eventuale manometro e set per la misurazione della PVC

Vantaggi e svantaggi delle diverse sedi

	comprimibile	PNX	spostabilità	infezioni
Giugulare interna	**+++**	**+-**	**++**	**+**
Succlavia	**-**	**++**	**+**	**+**
femorale	**+++**	**-**	**+-**	**+++**

Altri vantaggi....

- Vena giugulare interna e succlavia:

  Misurazione PVC e SvO2

- Vena femorale:

  utile in emergenza e per metodiche di CRRT

Management of spontaneous pneumothorax: British Thoracic Society pleural disease guideline 2010

Andrew MacDuff,[1] Anthony Arnold,[2] John Harvey,[3] on behalf of the BTS Pleural Disease Guideline Group

Thorax 2010;**65**(Suppl 2):ii18–ii31. doi:10.1136/thx.2010.136986

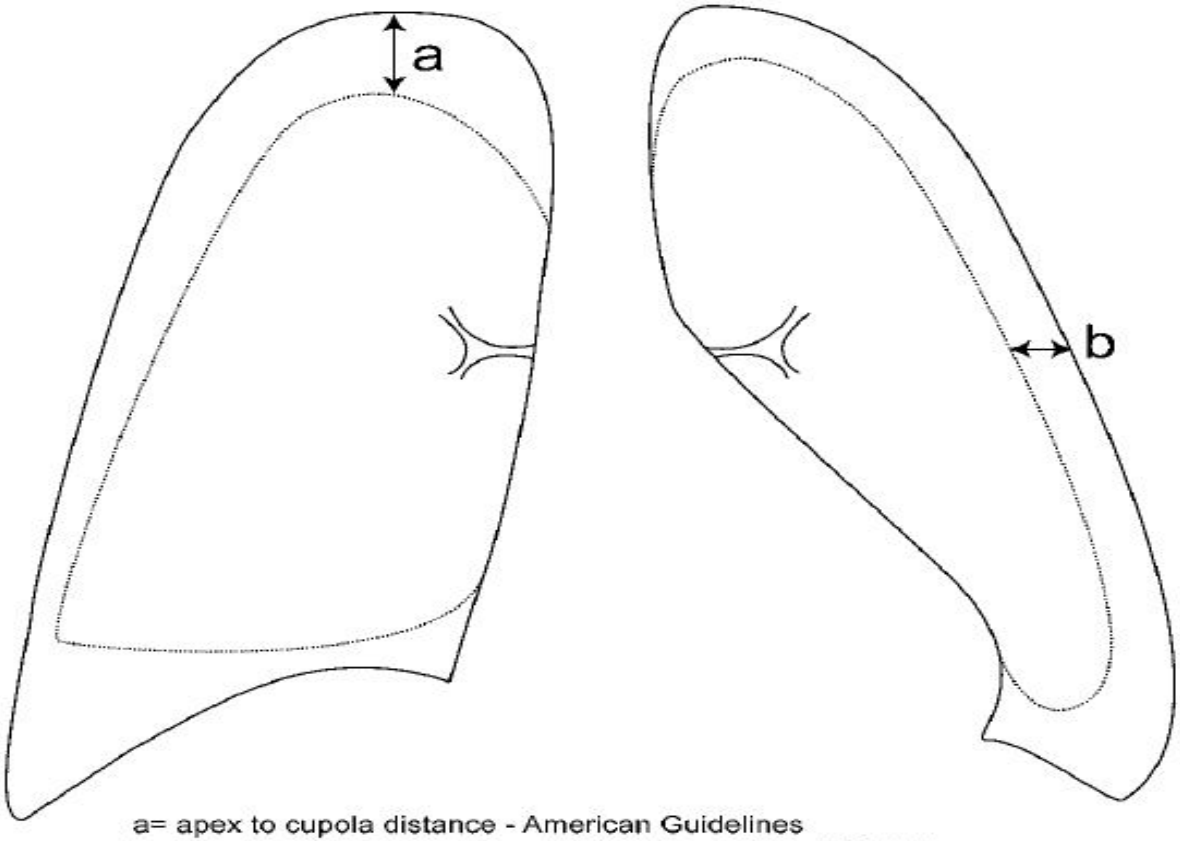
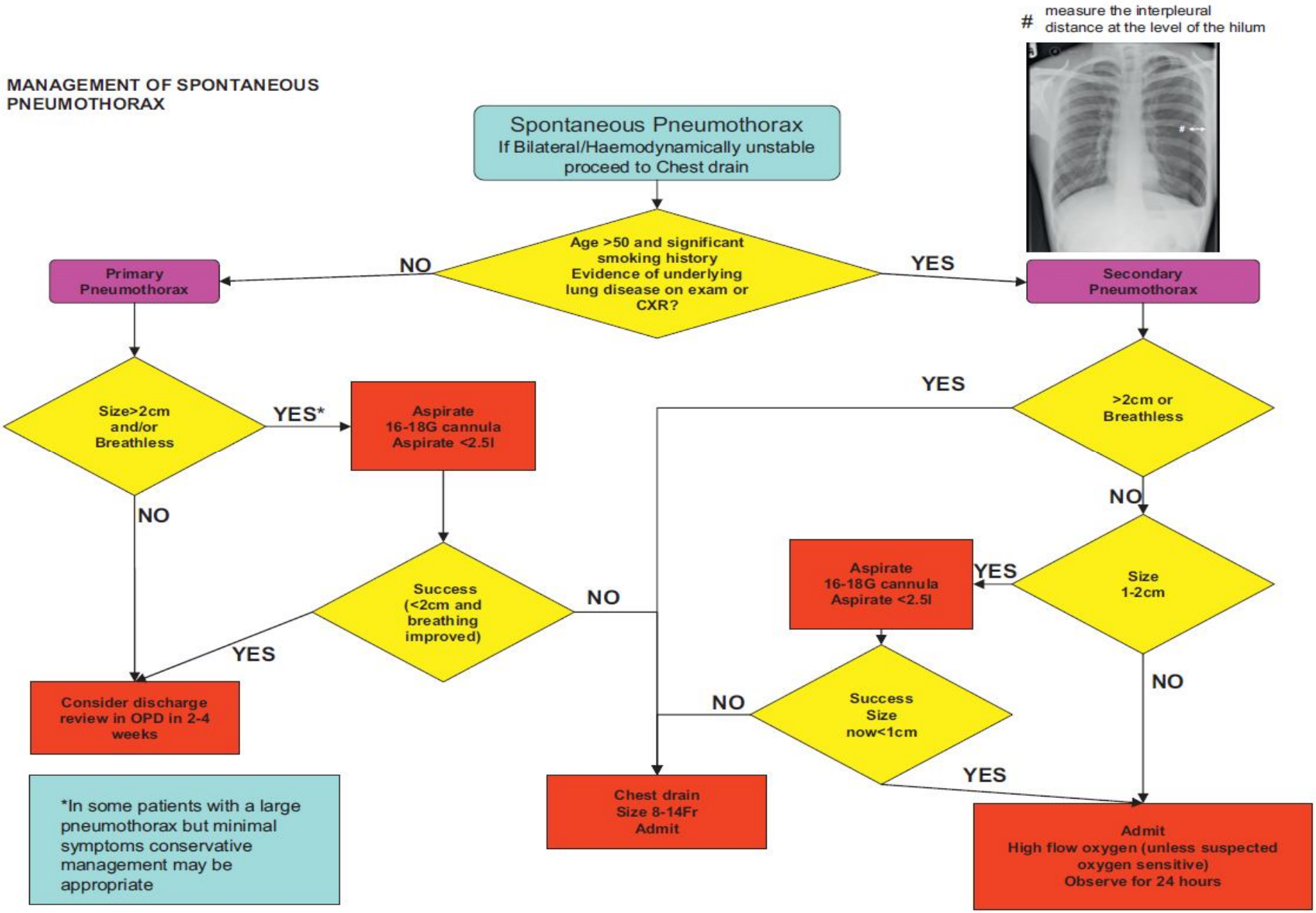


Figure 1 Depth of pneumothorax.

Thorax 2010;**65**(Suppl 2):ii18–ii31. doi:10.1136/thx.2010.136986



A

B

C

D

Official Journal of the Asian Pacific Society of Respirology
Respirology

INVITED REVIEW SERIES: PLEURAL DISEASE
SERIES EDITORS: JOSÉ M. PORCEL AND Y.C. GARY LEE

Pleural controversy: Optimal chest tube size for drainage

RICHARD W. LIGHT

Most haemothoraces are due to trauma, although occasionally haemothoraces occur due to pleural malignancy, anticoagulation and several other disease states.[3] Patients with a haemothorax should have a chest tube inserted. The advantages of the

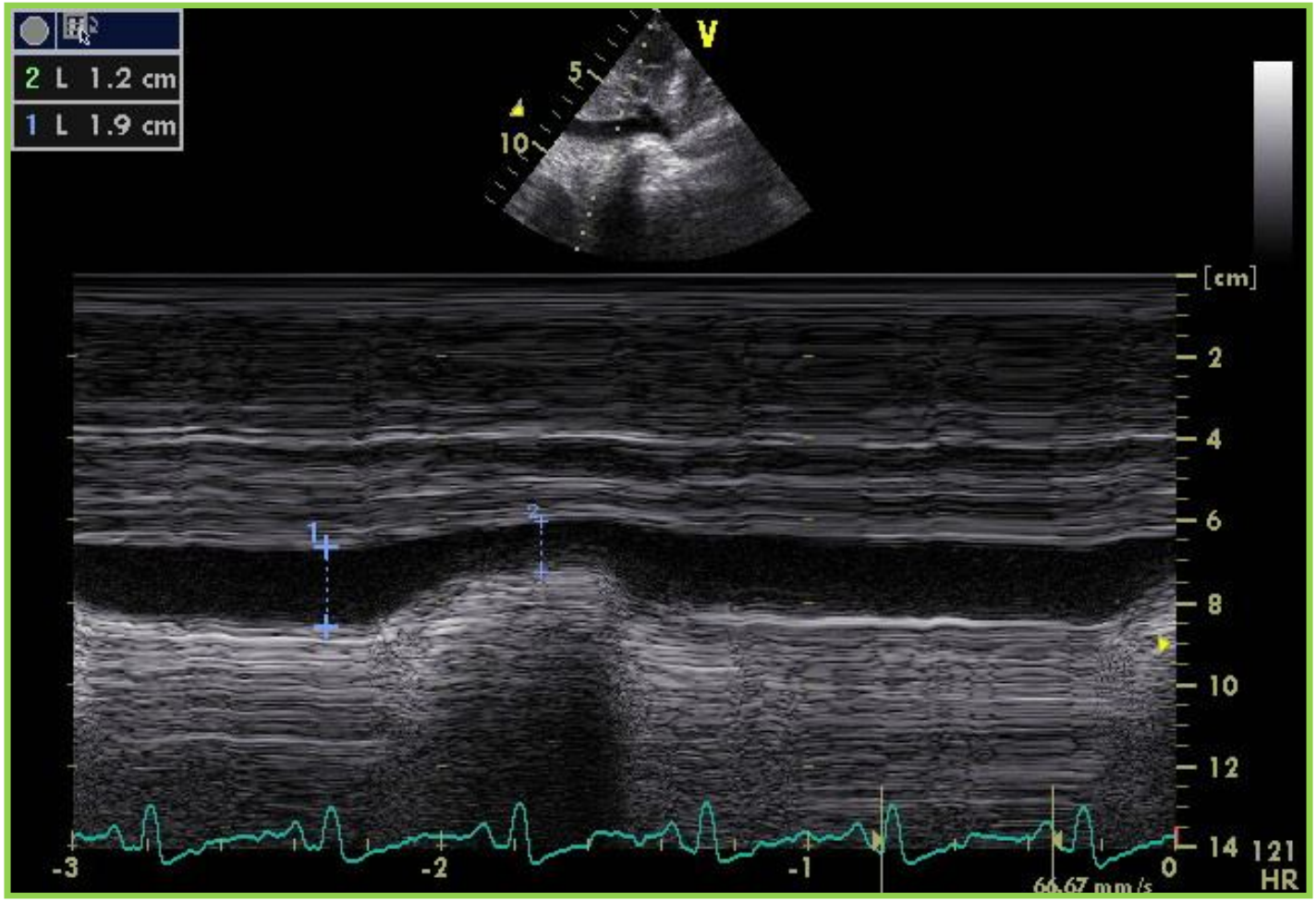
In general, large-bore (≥24 F) chest tubes are recommended for haemothorax. Again there are no randomized studies comparing large- and small-bore tubes. The reason for the recommendation for larger chest tubes with haemothorax than with malignant or parapneumonic effusions is that the blood may contain clots and the volume of the fluid may be too large for a small-bore tube. In general, massive haemorrhage (>1500 mL) defines the need for exploration. The continued drainage of more than 250 mL/h for 4 h also is an indication for exploration.

occult should be treated with a chest tube.[3] With traumatic pneumothorax, the lung expands and the air leak usually ceases within 24 h. Although there are no controlled studies, small-bore rather than large-bore chest tubes are recommended. If the lung does not expand or if there is a persistent air leak after 3 days, a large-bore chest tube can be inserted. If the problem is not resolved with the large-bore chest tube, consideration should be given to performing VATS.[26]

not expand or the pneumothorax got worse.[31] The results of this study suggest that if a pneumothorax is due to barotrauma in the mechanically ventilated patients, it is probably better to insert large-bore chest tubes.

Saper essere invasivi....

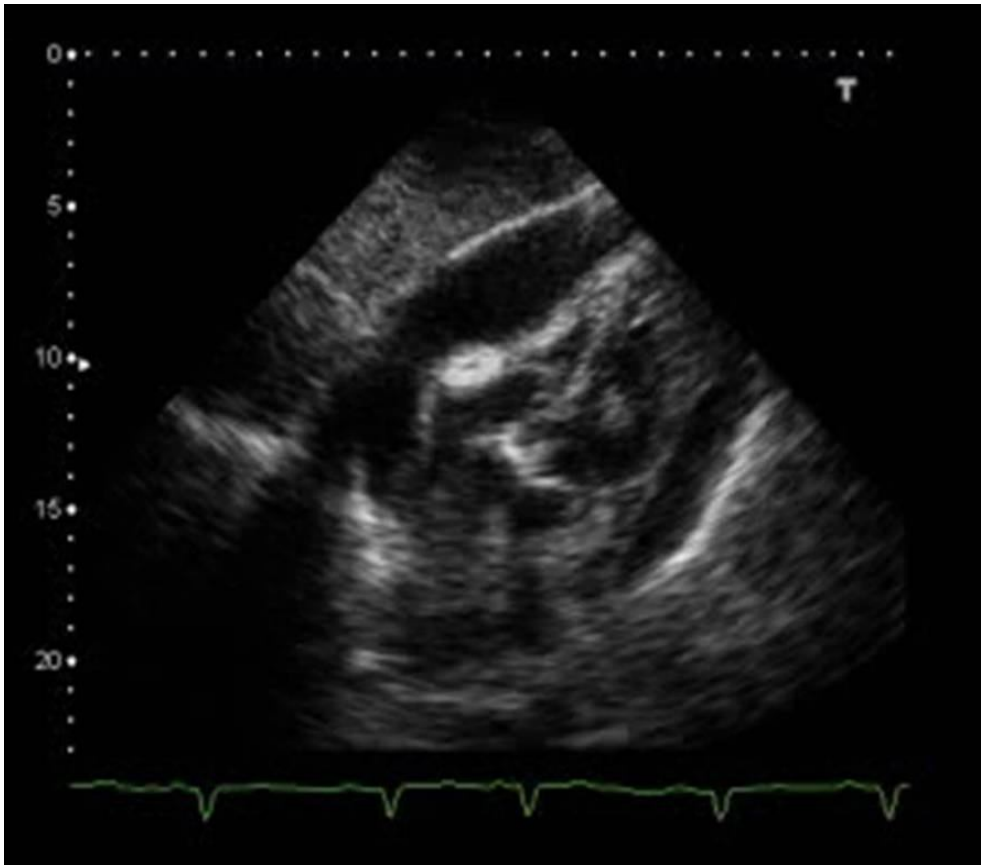
..... ma provare ad essere non invasivi

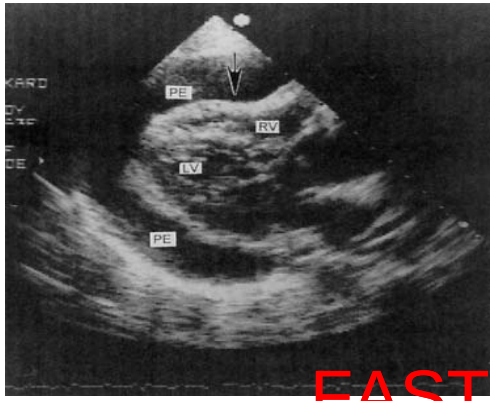


I.C. = 30%

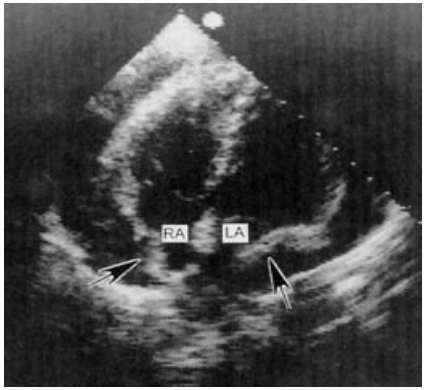
3?
Ecografia

Tamponamento cardiaco



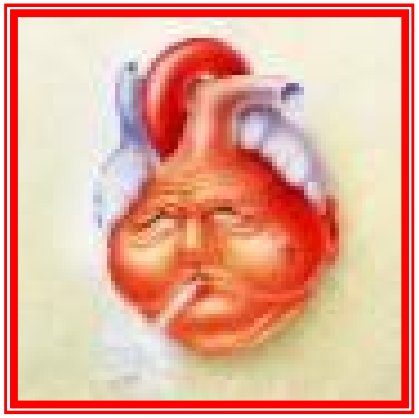


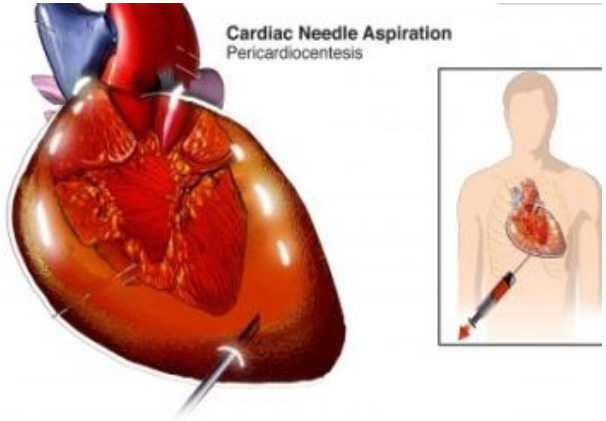
Tamponamento cardiaco:



FAST

DIAGNOSI + TRATTAMENTO
(ECO + PERICARDIOCENTESI)





Rimozione di 5-10ml liquido pericardico

Aumento dello stroke volume 25-50%

Rottura di atrio: segni e sintomi di Tamponamento cardiaco si manifestano lentamente..

ECO FAST DI CONTROLLO!!

ELSEVIER

Ultrasound in Med. & Biol., Vol. 38, No. 3, pp. 349–359, 2012

0301-5629/$ - see front matter

doi:10.1016/j.ultrasmedbio.2011.11.015

● *Review*

CLINICAL INTEGRATED ULTRASOUND OF THE THORAX INCLUDING CAUSES OF SHOCK IN NONTRAUMATIC CRITICALLY ILL PATIENTS. A PRACTICAL APPROACH

ROBERTO COPETTI,* PAOLO COPETTI,* and ANGELIKA REISSIG†

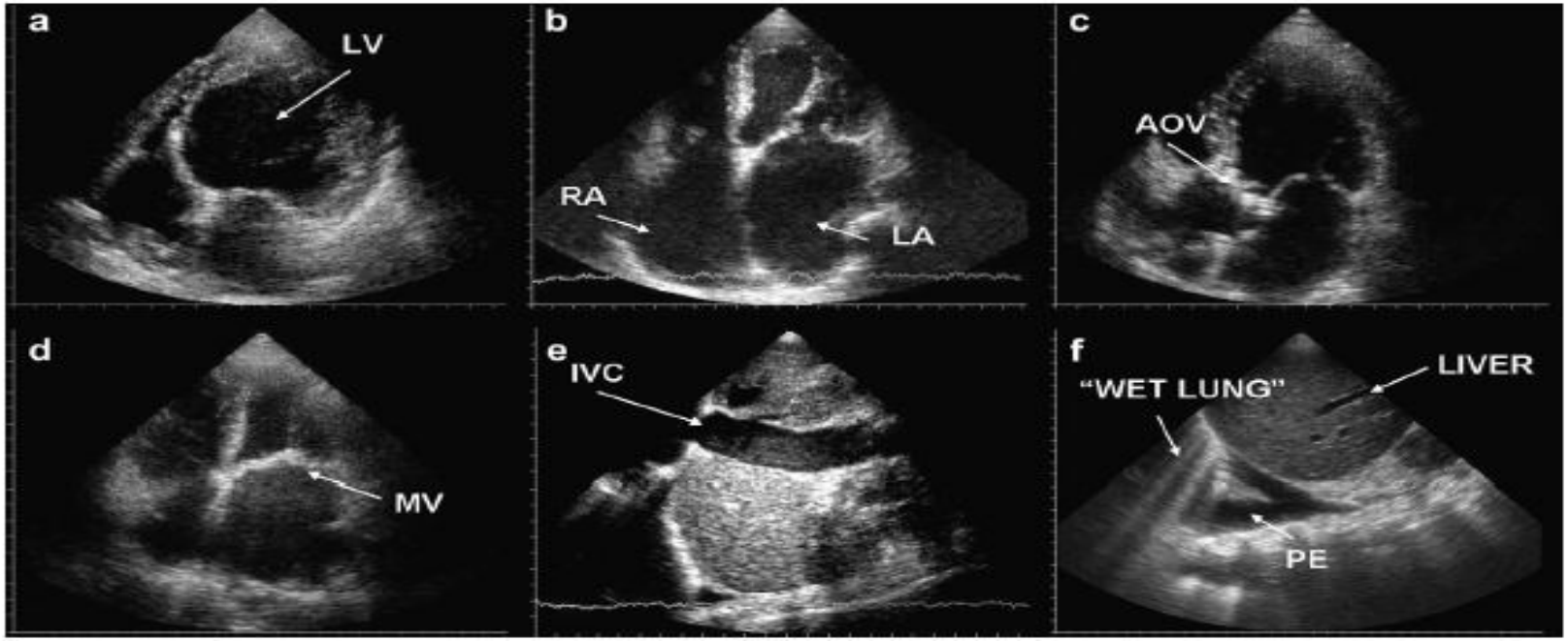


Fig. 14. Possible echocardiographic findings in cardiogenic shock. (a) LV dilatation in a patient with severe systolic dysfunction, (b) important atrial dilatation in a patient with diastolic dysfunction, (c) aortic valve stenosis, (d) mitral valve stenosis, (e) dilated IVC, (f) "wet lung" and pleural effusion. LV = left ventricle; RA = right atrium; LA = left atrium; AOV = aortic valve; MV = mitral valve; IVC = inferior vena cava; PE = pleural effusion.

Heart	IVC	Lung	CUS
Systolic and diastolic dysfunction	Dilated	• Evidence of B-lines • Pleural effusion	
Valvular dysfunctions	Dilated	• Evidence of B-lines • Pleural effusion	
Mechanical complications of AMI	Dilated	• Evidence of B-lines • Pleural effusion	
Massive pulmonary embolism	Dilated	No B-lines	Positive or negative
Cardiac tamponade	Dilated	No B-lines	

IVC = inferior vena cava; AMI = acute myocardial infarction; CUS = compressive ultrasound.

CARDIOGENIC SHOCK

Ultrasound in Med. & Biol., Vol. 38, No. 3, pp. 349–359, 2012

0301-5629/$ - see front matter

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CLINICAL INTEGRATED ULTRASOUND OF THE THORAX INCLUDING CAUSES OF SHOCK IN NONTRAUMATIC CRITICALLY ILL PATIENTS. A PRACTICAL APPROACH

ROBERTO COPETTI,* PAOLO COPETTI,* and ANGELIKA REISSIG†

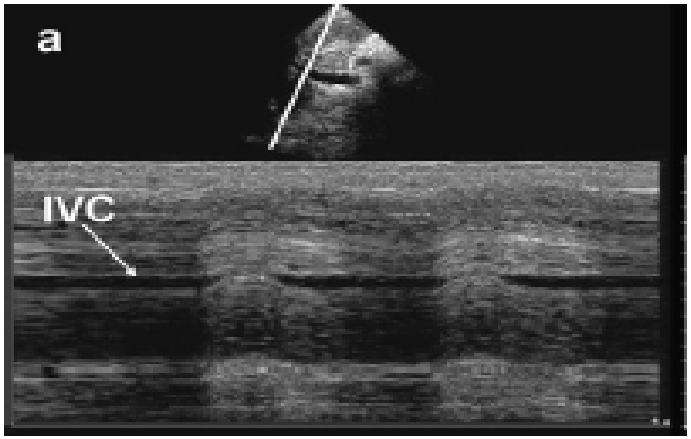


Table 4. Ultrasound findings in hypovolemic shock

Heart	IVC	Lung	Abdomen
Small and hyperkinetic chambers	Slight	• No B-lines • Massive hemothorax	• Hemoperitoneum • Abdominal aortic aneurysm
Volume expansion monitoring	Volume expansion monitoring	Volume expansion monitoring	• Ectopic pregnancy

IVC = inferior vena cava.

Table 2. Role and possible ultrasound findings in septic shock

Heart	IVC	Lung	Abdomen
Small and hyperkinetic chambers	Slight	• No B-lines • ARDS	
Sepsis-related cardiomyopathy		• Pneumonia • Empyema	• Subphrenic abscesses • Cholecystitis
Contractility end volume expansion monitoring	Volume expansion monitoring	Volume expansion monitoring (B-line monitoring)	• Pyonephrosis • Liver or spleen abscesses
Endocarditis			• Ascitis

IVC = inferior vena cava; ARDS = acute respiratory distress syndrome.

EMERGENZE PEDIATRCHE!!

non consideratemi un adulto in miniatura

cambiano i parametri vitali normali

	FC/veglia	FC/sonno	FR	PA sistolica	PA diastolica
Neonato	100-180	80-160	40-60	60-90	20-60
Lattante	100-160	75-160	30-60	87-105	53-66
1° infanzia (2 anni)	80-110	60-90	24-40	95-105	53-66
2° infanzia (5 anni)	70-100	60-90	22-34	96-110	55-69
Età scolare (7 anni)	65-110	60-90	18-30	97-112	57-71
Adolescente (15 anni)	60-90	50-90	12-16	112-128	66-80

Robert M. Kliegman, et al., editors, Nelson Textbook of Pediatrics, 18th edition (Philadelphia: Saunders Elsevier, 2007), 389. modificato

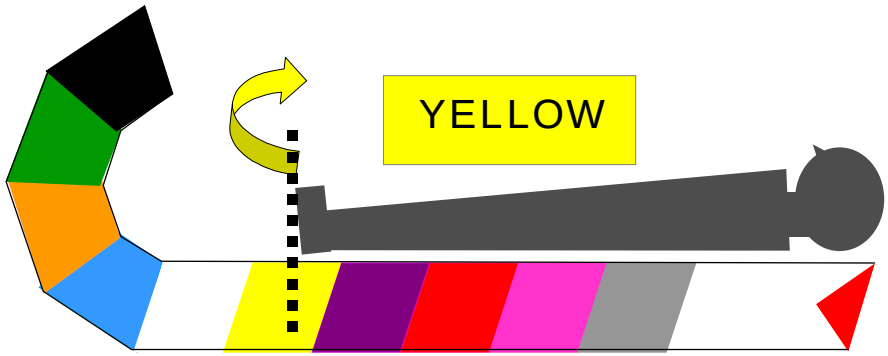
sono diversi i presidi da utilizzare....

	neonato		*tra 4 e 7 kg*		*tra 8 ed 11 kg*		*tra 11 e 14 kg*		*tra 14 e 17 kg*		*tra 18 e 22 kg*		*tra 24 e 30 kg*		*oltre 34 kg*	
PRESIDI	**GRIGIO**	**OK √**	**ROSA / ROSSO**	**OK √**	**VIOLA**	**OK √**	**GIALLO**	**OK √**	**BIANCO**	**OK √**	**BLU**	**OK √**	**ARANCIO**	**OK √**	**VERDE**	**OK √**
Maschera per ventilazione	0 / 1		2 / 3		3		3		3		3		3		4	
Canala di Guedel	35 mm / 45 mm		45 mm		55 mm		55 mm		55 mm		70 mm		70 mm		70 / 90 mm	
Catetere Aspirazione	8 fr		8 fr		10 fr		10 fr		10 fr		10 fr		10 fr		10 fr	
Lama laringoscopio	0 / 1 dritta (curva)		1 dritta (curva)		1 dritta (curva)		2 dritta (curva)		2 dritta (curva)		2 dritta / curva		2 dritta / curva		3 dritta / curva	
Tubo endotracheale	2,5 – 3 3,5 no cuffia		3,5 no cuffia		4 no cuffia (cuffiato)		4,5 no cuffia (cuffiato)		5 no cuffia (cuffiato)		5,5 no cuffia (cuffiato)		6 cuffiato		6,5 cuffiato	
Mandrino	6 fr		6 fr		6 fr		6 fr		6 fr		14 fr		14 fr		14 fr	
Canula naso faringea	12 - 14 fr		14 fr		18 fr		20 fr		22 fr		24 fr		26 fr		30 fr	
Maschera Laringea LMA	1		1,5		2		2		2		2 - 2,5		2,5		3	
Sondino naso gastrico	5 - 8 fr		5 - 8 fr		8 - 10 fr		10 fr		10 fr		12 - 14 fr		14 - 18 fr		16 fr	
Catetere vescicale	5 fr		8 fr		8 - 10 fr		10 fr		10 - 12 fr		10 - 12 fr		12 fr		12 fr	
Tubo toracico (trocar, Argyle)	10-12 fr		10 - 12 fr		16 - 20 fr		20 - 24 fr		20 - 24 fr		24 - 32 fr		28 - 32 fr		32 - 38 fr	
Ago canula	22 - 24 ga		22 - 24 ga		20 - 24 ga		18 - 22 ga		18 - 22 ga		18 - 20 ga		18 - 20 ga		18 - 20 ga	
Butterfly	22 - 24 ga		23 - 25 ga		23 - 25 ga		21 - 23 ga		21 - 23 ga		21 - 23 ga		21 - 22 ga		18 - 21 ga	

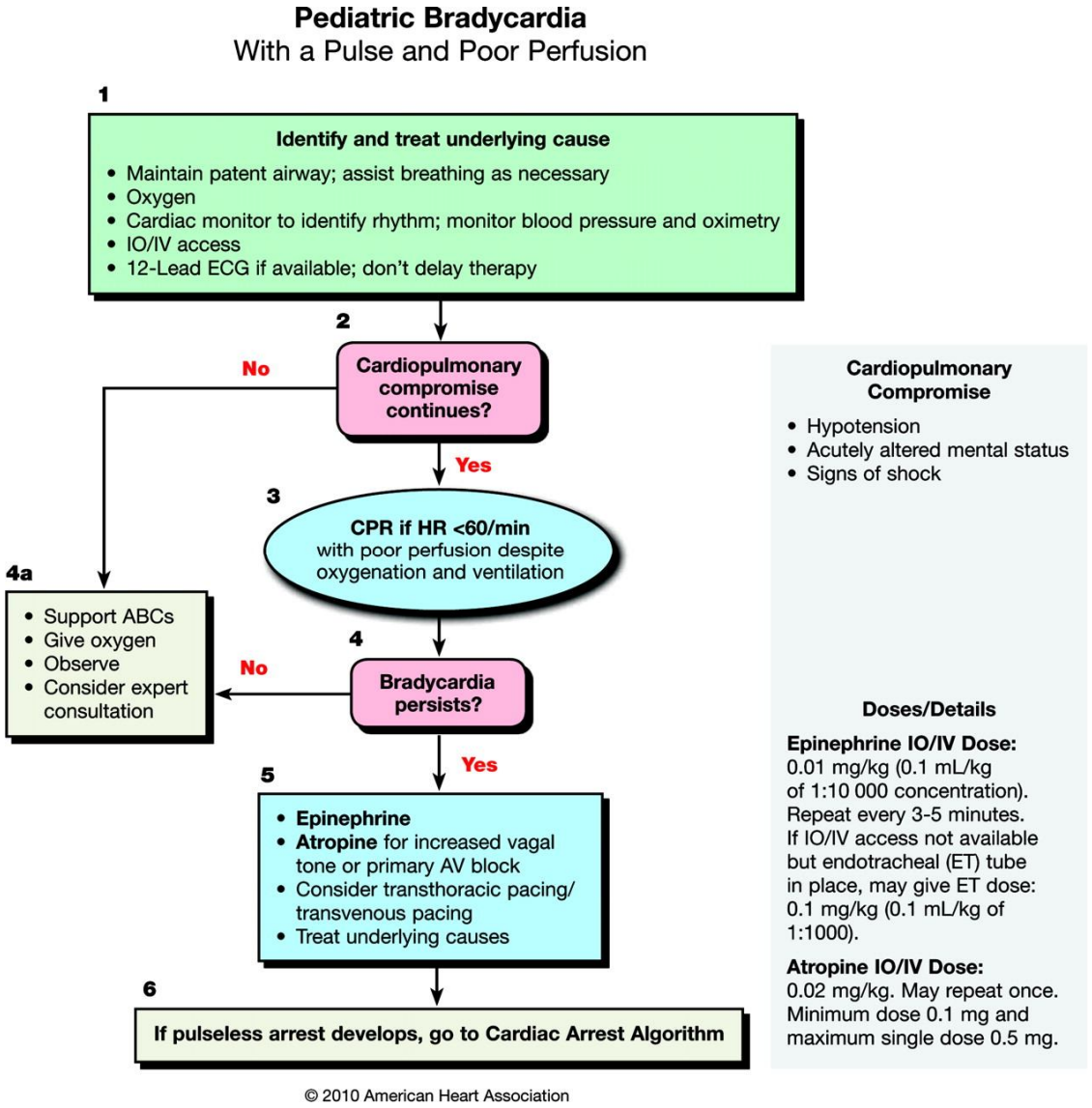
CHECK LIST CASSETTI BIMBI A COLORI **DATA,……** **FIRMA……**

The Broselow-Luten System
Emergency System

EPINEPHRINE	
Concentration 0.1 mg/mL 1:10,000	
PINK	0.65 mL
RED	0.85 mL
PURPLE	1 mL
YELLOW	1.3 mL
WHITE	1.7 mL
BLUE	2 mL
ORANGE	2.7 mL
GREEN	3.3mL



PALS Bradycardia Algorithm.



Kleinman M E et al. Circulation 2010;122:S876-S908

American Heart Association
Learn and Live

4

PATIENT SAFETY/REVIEW ARTICLE

Identifying Nontechnical Skills Associated With Safety in the Emergency Department: A Scoping Review of the Literature

"Nontechnical skills: the cognitive, social and personal resource skills that complement technical skills, and contribute to safe and efficient task performance and are necessary for effective team functioning"

Mis-Communication: 12% of errors (hierarchy, noise, absence of somewhere to speak in private)

Workload management: dealing with interruptions, assigning roles, prioritizing tasks for individual and triaging patients, coordinating team activities

Excessive workload – contrbuting factor in 23% of cases.

Maintenance of standards: established treatment protocols or guidelines

Effective leadership – one of the main factors associated with high clinical performance

Identifying Nontechnical Skills Associated With Safety in the Emergency Department: A Scoping Review of the Literature

Lynsey Flowerdew, MBChB, MD, Ruth Brown, MBBS, Charles Vincent, PhD, BA, Maria Woloshynowych, PhD, BSc

From the Centre for Patient Safety and Service Quality, Department of Surgery and Cancer, Imperial College, London, UK (Flowerdew, Vincent, Woloshynowych); and St Mary's Emergency Department, Imperial College Healthcare NHS Trust, London, UK (Brown).

Volume 59, NO. 5 : May 2012 Annals *of* Emergency Medicine 387

"Nontechnical skills" for optimum patient care

- Communicating
- Managing workload
- Anticipating
- Situational awareness
- Supervising and providing feedback
- Leadership
- Maintaining standards
- Using assertiveness
- Decisionmaking

Figure. Nontechnical skills associated with error and safety in the ED.

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Strategies for managing a busy emergency department

Samuel G. Campbell, MB BCh;* Douglas E. Sinclair, MD;*
for the Canadian Association of Emergency Physicians Flow Management contributors†

Can J Emerg Med 2004;6(4):271-6

HOW TO MAXIMIZE ED PATIENT FLOW AND ED PRODUCTIVITY WITHOUT INCREASING STRESS LEVELS, REDUCING CARE STANDARDS OR COMPROMISING PATIENT SAFETY

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Can J Emerg Med 2004;6(4):271-6

Tailor investigation and management to risk

Avoid investigations that are better done elsewhere

Don't order tests that will not or should not affect patient management[11,12]

Implement guidelines and clinical decision rules to initiate necessary testing

Strategies for managing a busy emergency department

Can J Emerg Med 2004;6(4):271-6

Communicate with patients

Develop a good rapport

Establishing a good relationship with patients is not merely good manners; relationships enhance trust and confidence, reduce medicolegal risk, facilitate more rapid discharge, improve patient compliance and the image of our profession. Apologize for the wait, maintain eye contact and, if possible, sit down while taking the history. Address underlying anger and patient expectations early. Be friendly, respectful and interested, and include family members in the history process. Physical contact (i.e., handshake) will help establish rapport. Inform them if you are using a validated clinical decision rule that indicates if tests are necessary.

Make multiple short visits to the patient's bedside

Several short visits to the patient's bedside rather than one protracted visit just prior to discharge will make eventual disposition easier for the patient to accept. Go into the cubicle for a few seconds between seeing other patients, ask how the patient is, and provide an update; this will enhance communication and strengthen your relationship and credibility.

Anticipate the outcome; communicate expectations early to patients

Explain your intended course of action and the expected outcomes. (It's helpful to clarify these in your own mind also.) If you believe you will be unable to confirm a definitive diagnosis, inform the patient. It is easier to discharge

Strategies for managing a busy emergency department

Can J Emerg Med 2004;6(4):271-6

Don't delay uncomfortable decisions

Recognize situations where an uncomfortable decision is inevitable, and where waiting or doing tests will not make it more palatable. Make that decision as soon as possible.

Politely communicate the concept of "emergency facility"

If a patient adds non-urgent problems to their main complaint, politely avoid attempting to solve these problems. An analogy to phoning their accountant at 2 am may help.

Strategies for managing a busy emergency department

Can J Emerg Med 2004;6(4):271-6

Deal with consultants in a professional manner

Use "flow directed" triage

When presented with several patients of the same triage level[16] you may choose not to see them in order of arrival. It may be more efficient to assess a patient with an obvious UTI before one with a Crohn's exacerbation, so that the former's bed is rapidly available for the next patient.

Manage your time

Use slow times to recharge

If the pace slackens but you foresee an impending influx of non-critical patients at triage, seize the opportunity for you and your housestaff to have a nutrition break.

Grazie per l'attenzione

PALS Pulseless Arrest Algorithm

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Chronic State of Emergency Department (ED) Overcrowding in North America

- Acute care bed closures
- Early discharge of patients who are still relatively ill
- Patients without primary care physicians turn increasingly to Eds for this care
- Patients with **chronic illness** face **prolonged waits** for **diagnostic** modalities and **specialty consultation** – delays thet often **lead to decompensation** and urgent ED treatment
- lack of acute care beds → patients held **in the ED for prolonged periods**, interfering with the assessment and management of arriving patient with urgent

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ED overcrowding has been found to correlate with:

1) increased patient mortality
2) decreased patient satisfaction

Il sovraffollamento dei Pronto Soccorso e dei Dipartimenti di Emergenza in Italia

Parte I: Cause e conseguenze

Massimo Magnanti, Maria Pia Ruggieri, Alessandra Revello°, Giovanna Esposito*

Decidere in Medicina - Anno XII n. 4 agosto 2012

- Ministero della Salute: progressivo incremento degli accessi in Pronto Soccorso negli ultimi anni (21.274.174 nel 1997; 24.215.174 nel 2009

- Deospedalizzazione dei processi assistenziali / costante riduzione dei posti letto ordinari (Regione Lazio riduzione del 25%)

Crowding occurs when the identified need for emergency services exceeds available resources for patient care in the ED, hospital or both

American College of Emegency Physician (ACEP) 2006

Tab. 2 Fattori coinvolti nell'overcrowding.

Input	Throughput	Output
Invecchiamento popolazione e maggiore richiesta di ricovero	Flessibilità del triage globale, difficoltà nel rispetto dei tempi ottimali di accesso alla visita	Diffusione non capillare delle unità di breve osservazione e di osservazione breve intensiva
Cattiva gestione domiciliare delle malattie croniche	Efficienza e tempestività dei servizi diagnostici	Carenza di posti letto per acuti e di letti monitorati
Deficit di efficacia ed efficienza della continuità assistenziale: medici di famiglia, UCP, CAD, servizi territoriali...	Carenza/mancanza di consulenti, cattiva collaborazione tra professionisti	Scarsa efficienza dei reparti nel garantire un turnover adeguato con ricoveri prolungati
Assenza di azioni mirate sui *frequent users* ospedalieri	*Understaffing*	Individuazione in tempo reale dei posti letto disponibili
Difficoltà di accesso alle prestazioni urgenti	Limiti strutturali PS/DEA	Carenza di *discarge room* ospedaliere
Picchi stagionali epidemici e mancata profilassi vaccinale	Inadeguatezza risorse economiche	Pazienti *bed-blockers*, dimissioni difficili
Ricoveri inappropriati	Carenza servizi di telemedicina	Carenza letti postacuzie
Centralizzazione negli ospedali metropolitani delle urgenze	Irrazionale organizzazione delle reti per l'emergenza	Difficoltà invio pazienti in RSA, riabilitazioni, lungodegenze
Inadeguata gestione delle liste di attesa per i ricoveri in elezione	Pratica della cosiddetta medicina difensiva	Possibilità di gestire pazienti in ambulatori postdimissioni e/o in day hospital/service
Cattiva informazione dei mass-media, scarsa educazione sanitaria	Utilizzo di personale transitorio o di limitata esperienza nell'emergenza	Carenza servizi sociali per homeless, senza fissa dimora...
Richieste inappropriate ai PS: accertamento età, certificazioni di malattia, prestazioni ambulatoriali, prescrizione di farmaci...	Carenza di raccomandazioni operative, di attività di valutazione del rischio clinico, limitato supporto delle direzioni sanitarie	Assenza di controlli sui ricoveri prolungati: motivazioni cliniche? Difficoltà sociali? Indisponibilità di letti di lungodegenza? RSA? Altro?
Incremento popolazione povera, difficoltà per affrontare le spese sanitarie	Mancata attenzione al benessere degli operatori	Ricoveri in reparti non appropriati (appoggi, malati instabili...)
Riduzione della rete di assistenza familiare	Burocrazia di Pronto Soccorso	Efficienza e tempestività dei servizi di assistenza territoriale

ELSEVIER

The Journal of Emergency Medicine, Vol. ■, No. ■, pp. 1–7, 2012

0736-4679/$ - see front matter

doi:10.1016/j.jemermed.2012.02.033

Original Contributions

SELF-REPORTED USE OF COMMUNICATION TECHNIQUES IN THE EMERGENCY DEPARTMENT

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According to the Institute of Medicine, >90 million Americans have difficulty understanding health information (1). Previous research has established a strong relationship between low literacy and poor health outcomes (2–6). Understanding how care providers are communicating new information to patients and how this communication can be improved is critical.

The Accreditation Council for Graduate Medical Education, the American Board of Medical Specialties, and the Joint Commission have established communication as a core competency for physicians (7–9). Although many providers are aware of communication techniques and believe that they are effective, this awareness has not translated into high rates of use (10). Furthermore, many efforts at improving communication with patients

the American Medical Association (AMA)

Communication Techniques

SELF-REPORTED USE OF COMMUNICATION TECHNIQUES IN THE EMERGENCY DEPARTMENT

Danielle M. McCarthy, MD,* Kenzie A. Cameron, PHD, MPH,†‡ D. Mark Courtney, MD,* and John A. Vozenilek, MD*

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0736-4679/$ - see front matter

***Spoken interactions** can be especially **challenging** in Emergency Department:*

- *time constraints*
- *interruptions*
- *staff changes*
- *overcrowding*
- *heterogeneity in the types of patients*
- *heterogeneity in the types of medical problems*

L'alcalosi metabolica ed il rene

Priorità: volume intravascolare ➡ acidosi urinaria "paradossa'

Nei casi dubbi - misurazione della frazione escreta del Cl^- (direttamente proporzionale con il volume intravascolare e la perfusione renale)

$$FE_{Cl} = \frac{[Cl]\ u \times [Crea]\ p}{[Crea]\ u \times [Cl]\ p} \%$$

$$FE_{Na} = \frac{[Na]\ u \times [Crea]\ p}{[Crea]\ u \times [Na]\ p} \%$$

Raccolta delle 24 ore: nel pz disidratato

FE(Cl) <0.7%, o FE(Na) <1%

Spot urine: $[Cl^-]$ <10 mEq/L

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Tailor investigation and management to risk

It is not always possible to make the exact diagnosis in the ED

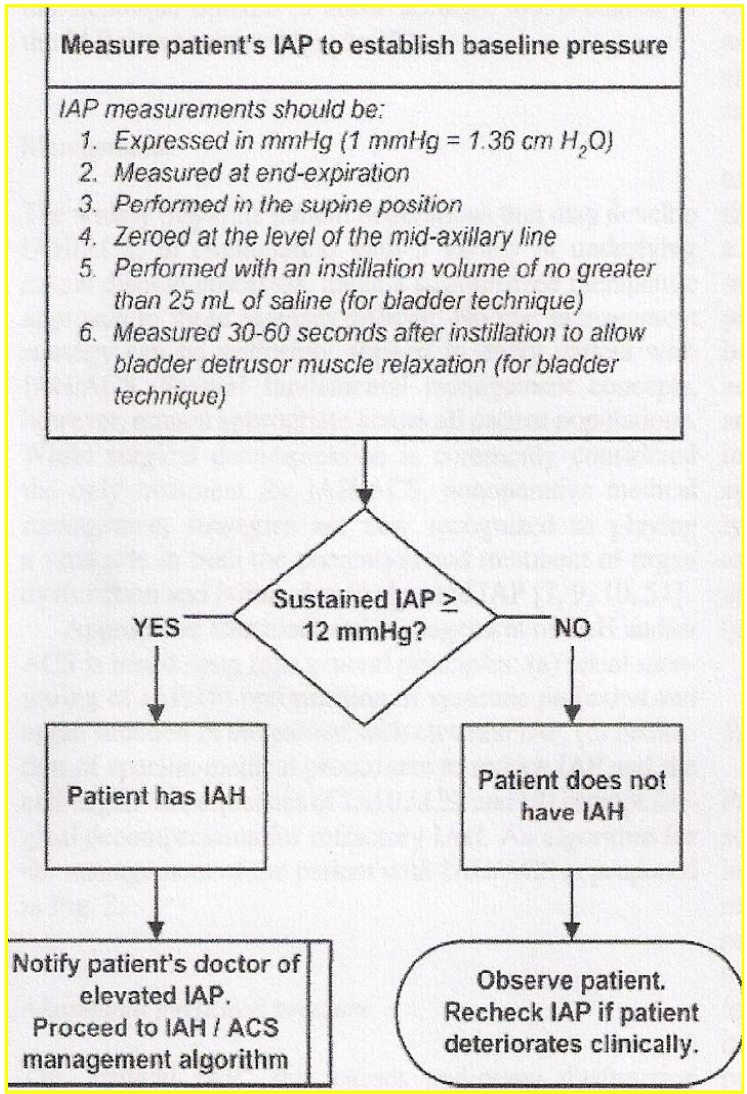
The level of diagnostic certainty required correlates directly with ***the patient's likelihood of an adverse outcome***
(age, current diagnosis, comorbidity, socioeconomic status and pre-morbid health)

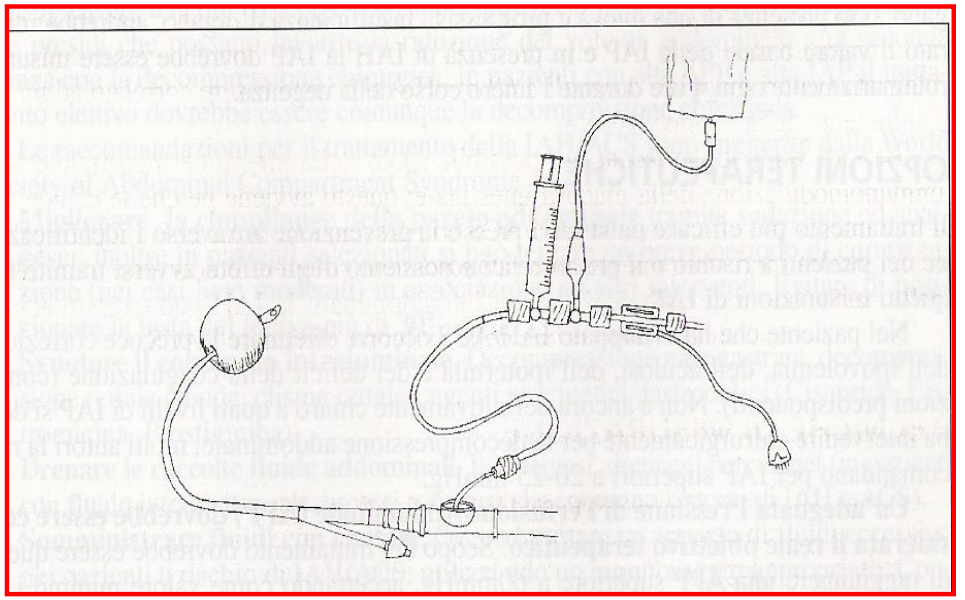
In many cases , ***patient education, discharge and reassessment*** may be appropriate (assuming that the patient will follow discharge istructions and has the ability to recognize deterioration and act appropriately)

Michael L. Cheatham
Manu L. N. G. Malbrain
Andrew Kirkpatrick
Michael Sugrue
Michael Parr
Jan De Waele
Zsolt Balogh

Results from the International Conference of Experts on Intra-abdominal Hypertension and Abdominal Compartment Syndrome. II. Recommendations

Intensive Care Med (2007) 33:951–962





World Society of Abdominal Compartment Syndrome *(WSSCS):*

IAP

* valori normali: **5-7 mmHg**
* pazienti obesi: **7-14 mmHg**
* pz in posizione semiseduta (30–45°): **4–9 mmHg**

APP=MAP-IAP
Vn: ≥60mmHg

Ipertensione intra-addominale **(IAH):**

➡ persistente elevazione della IAP ≥ **12 mmHg**

I grado: 12-15mmHg, II grado: 16-20mmHg,
III grado: 21-25mmHg, IV grado: >25mmHg.

Sindrome compartimentale addominale **(ACS)**:

incremento della IAP > **20 mmHg** associata ad una disfunzione o insufficienza d'organo di nuova insorgenza

Strategies for managing a busy emergency department

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Remember that some patients should not be "rushed"

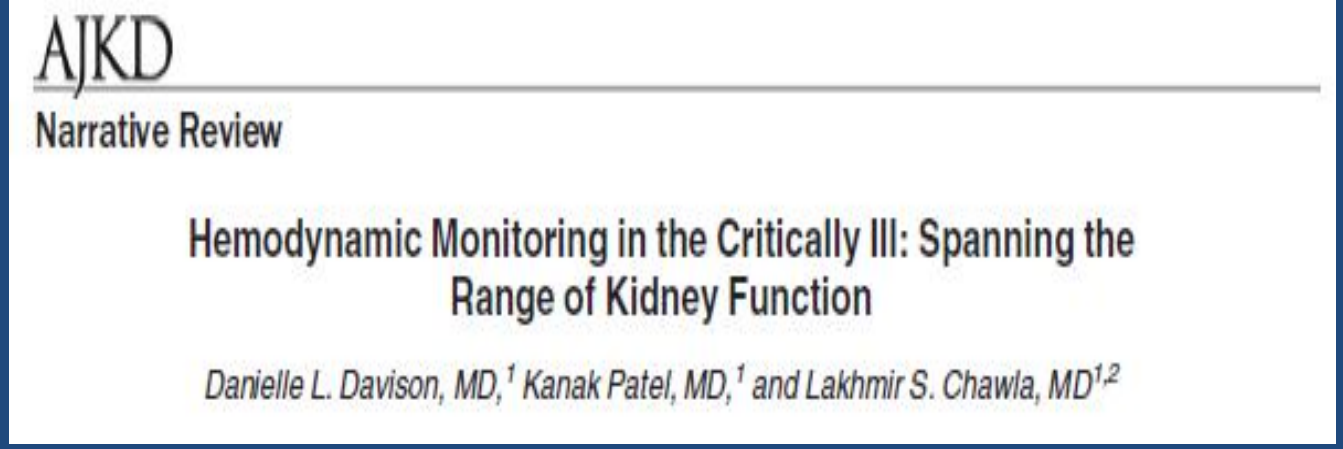
Patients with chest pain, foreign bodies and fractures should always be assessed and treated with prudence. Beware patients on return visits and those handed over at shift change. Heuristics or "short-cuts" used to facilitate patient flow will increase the risk of misdiagnosis and should generally be avoided.[15]

Strategies for managing a busy emergency department

Can J Emerg Med 2004;6(4):271-6

Remember who you are

Emergency medicine differs from other medical specialties, and anyone who prefers to solve one problem before moving to the next is in the wrong profession. One respondent stated: "Working in the ED is like cooking supper; you need to manage multiple patients with a variety of problems that require a variety of questions, examinations, investigations and interventions — and do it all concurrently, just like cooking several different dishes at once." If you are at a loss about what to do with a patient, if that patient is stable, move on to the next. You will be agreeably surprised by what comes into your mind when you return to this difficult patient after time spent with another.



A.K.I.

- Some form of cardiac monitoring (invasive or noninvasive, as determined by the clinical context) sholuld be used
- Fluids should be administred as long the patient is fluid responsive
- When the patient is no longer fluid responsive, other inteventions for **cardiac output augmentation** should be considered, if indicated

The "septic kidney" is not necessarily fluid responsive

Rx Torace