

25 Maggio 2018



XI congresso nazionale

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ROMA 24-26 MAGGIO 2018

**SESSIONE
DOLORE TORACICO**

L' ECOSCOPIA CUORE-POLMONE NEL DOLORE TORACICO

Dott. Alfonso Sforza

**Pronto Soccorso e Medicina d'Urgenza
Ospedale CTO, Napoli**



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AMERICAN SOCIETY OF ECHOCARDIOGRAPHY CONSENSUS STATEMENT

Focused Cardiac Ultrasound in the Emergent Setting: A Consensus Statement of the American Society of Echocardiography and American College of Emergency Physicians

Arthur J. Labovitz, MD, FASE, Chair,* Vicki E. Noble, MD, FACEP,** Michelle Bierig, MPH, RDCS, FASE,*
Steven A. Goldstein, MD,* Robert Jones, DO, FACEP,** Smadar Kort, MD, FASE,*
Thomas R. Porter, MD, FASE,* Kirk T. Spencer, MD, FASE,* Vivek S. Tayal, MD, FACEP,**
and Kevin Wei, MD,* *St. Louis, Missouri; Boston, Massachusetts; Washington, District of Columbia; Cleveland, Ohio;
Stony Brook, New York; Omaha, Nebraska; Chicago, Illinois; Charlotte, North Carolina; Portland, Oregon*

The use of ultrasound has developed over the last 50 years into an indispensable first-line test for the cardiac evaluation of symptomatic patients. The technologic miniaturization and improvement in transducer technology, as well as the implementation of educational curriculum changes in residency training programs and specialty practice, have facilitated the integration of focused cardiac ultrasound into practice by specialties such as emergency medicine. In the emergency department, focused cardiac ultrasound has become a fundamental tool to expedite the diagnostic evaluation of the patient at the bedside and to initiate emergent treatment and triage decisions by the emergency physician. (J Am Soc Echocardiogr 2010;23:1225-30.)

ECOGRAFO: QUALE USARE?



QUALITA' IMMAGINI/TEMPO PER OTTENERLE



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Bedside echo for chest pain: an algorithm for education and assessment

Richard Amini
Lori A Stolz
Jeffrey Z Kartchner
Matthew Thompson
Nicholas Stea
Nicolaus Hawbaker
Raj Joshi
Srikar Adhikari

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RESEARCH ARTICLE

Open Access

Focused cardiac ultrasound by unselected residents—the challenges



CrossMark

BMC Medical Imaging

Vidar Ruddox^{1,3*} , Ingvild Billehaug Norum^{1,3}, Thomas Muri Stokke³, Thor Edvardsen^{2,3} and Jan Erik Otterstad¹



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Validity of a 5-minute focused echocardiography with A-F mnemonic performed by non-echocardiographers in the management of patients with acute chest pain

Dorota Sobczyk^{1*}, Krzysztof Nycz¹ and Pawel Andruszkiewicz²

Table 5 Comparison of A-F-based echocardiography performed by residents on call and examination reported by cardiologist

A-F mnemonic	Findings	Concordance between the reports (%)
A	Aortic dilatation	100
A	Intimal flap	100
B	RV dilatation	100
B	RV overload (RV > LV)	100
C	RWMAs	100
C	Apical ballooning	100
C	Severely depressed global LV function	100
D	Abnormal heart dimensions (mild left atrial dimension)	57,32
E	Pericardial effusion	100
E	Pleural effusion	100
F	Further abnormalities (mild mitral regurgitation, mild/moderate tricuspid regurgitation)	70,76

RV-right ventricular; RWMAs-regional wall motion abnormalities; LV-left ventricular.

Table 3 Echocardiographic findings in study population

Echocardiographic mnemonic	Findings	Value
A (aorta)	Aortic dilatation, n (%)	62 (4,73)
	Aortic dissection, n (%)	5 (0,38)
B (both ventricle)	Right ventricular dilatation, n (%)	46 (3,51)
	Right ventricular overload, n (%)	20 (1,52)
C (contractility)	Regional wall motion disturbances, n (%)	921 (70,19)
	LVEF (%)	46,569 ± 13,41
	LVEF ≤ 30%, n (%)	199 (15,17)
D (dimensions)	Abnormal heart dimensions, n (%)	325 (24,77)
	Left ventricular dilatation, n (%)	71 (5,41)
	Left ventricular hypertrophy, n (%)	145 (11,05)
	Left and right atrial dilatation, n (%)	104 (7,97)
	Right ventricular dilatation, n (%)	54 (4,12)
E (effusion)	Pericardial or pleural effusion, n (%)	61 (4,65)
	Pericardial effusion, n (%)	48 (3,66)
	Cardiac tamponade, n (%)	3 (0,23%)
	Pleural effusion, n (%)	18 (1,37)
F (further abnormalities)	Further abnormalities, n (%)	242 (18,45)
	Mitral valve abnormalities, n (%)	126 (9,60)
	Aortic valve abnormalities, n (%)	77 (5,87)
	Other, n (%)	78 (5,95)
A + B + E + F	Any abnormality	319 (24,31)
Normal study	No abnormalities	74 (5,64)

LVEF-left ventricular ejection fraction.

IL DOLORE TORACICO

NON SEMPRE SINDROME CORONARICA ACUTA

SINDROMI AORTICHE

EMBOLIA POLMONARE

MALATTIE DEL PERICARDIO

CAUSE PLEURO-POLMONARI-MEDIASTINICHE

CAUSE MUSCOLO-SCHELETRICHE

ALTRO



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RADICE AORTICA



FUNZIONE SISTOLICA BI-VENTRICOLARE



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FUNZIONE SISTOLICA BI-VENTRICOLARE



PER LE SINDROMI CORONARICHE ACUTE

**NORMALE WALL MOTION REGIONALE NON PUÒ ESCLUDERE
UN EPISODIO DI ISCHEMIA TRANSITORIA**

**LA SENSIBILITA' DELL'ESAME E' ALTA IN PAZIENTE CON DOLORE
CONTINUO E PROLUNGATO**

**CONSIDERARE CHE LE ANOMALIE DEL WALL MOTION POSSONO
ESSERE PRESENTI IN ALTRE CONDIZIONI QUALI MIOCARDITI,
SOVRACCARICO PRESSORIO ACUTO DEL VENTRICOLO DX,
CARDIOMIOPATIA DI TAKOSTUBO, RITMO DA PMK ED ALTRE**

**CONSIDERARE LE COMPLICANZE COME ROTTURA DI CUORE, ROTTURA DEL
SETTO INTERVENTRICOLARE, INSUFFICIENZA MITRALICA ACUTA**



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**The use of echocardiography in acute
cardiovascular care: Recommendations of the
European Association of Cardiovascular Imaging
and the Acute Cardiovascular Care Association**



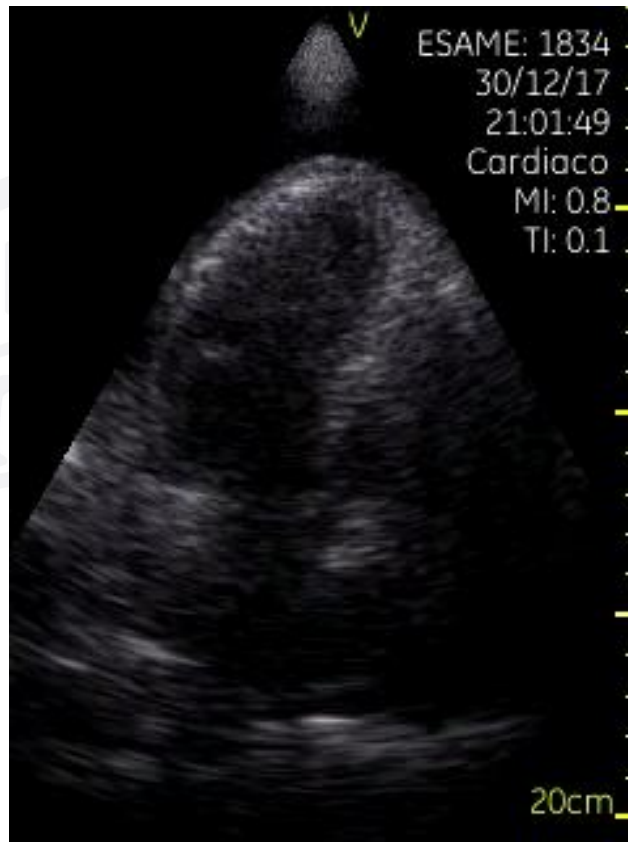
EUROPEAN
SOCIETY OF
CARDIOLOGY®



SEGNO DI MCCONNELL E D-SHAPE DEL VENTRICOLO SINISTRO



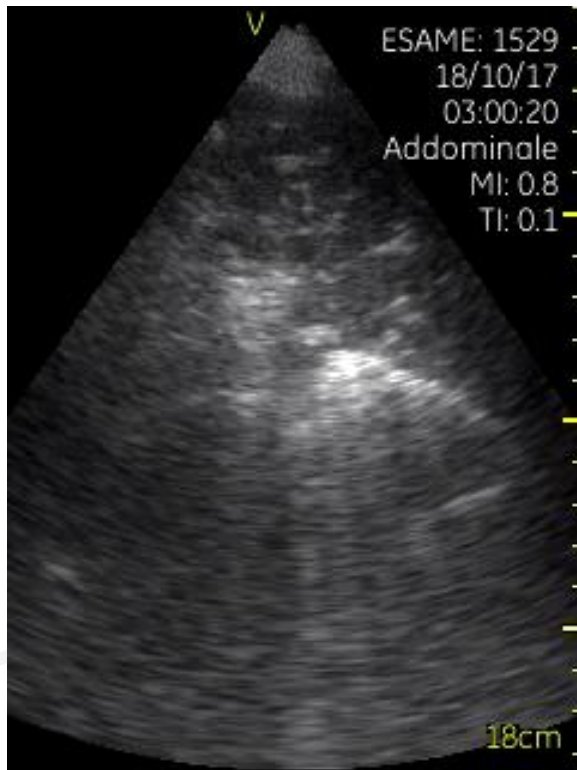
VERSAMENTO PERICARDICO



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POLMONE E PLEURA



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CHEST CASE

1	A	B	C
2	VIEW	PARAMETER	VALUE
3	VIEW	PARAMETER	+/-/#/NT
3	PLAX	PC EFFUSION	
4		DISS FLAP	
5		PERICARD THICK	
6		VALVE VEGETATION	
7		AORTIC ROOT DIAM	
8		RV THICKENING?	
9	M MODE	aortic root excursion	
10		EF = 75.7-(2.5) x epss	
11		FS. (EF = 2X FS)	
12	PSAX	WALL MOT ABNORMAL	
13	AP4C OR SX	MCCONNEL'S SIGN	
14		WALL MOT AB	
15		COLLAPSE RA SYSTO	
16		COLLAPSE RV DIASTO	
17	aorta ss	TRANS DIAMETER	
18		LONG DISS FLAP	
19		SS VIEW DISSECT	
20	LUNG	A LINE	
21		B LINE	
22		PLEURAL EFFUSION	
23		PNEUMOTHORAX	
24	CHEST WALL		
25	ESOPHAGEAL		
26	EMOTIONAL		
27	IVC COLLAPS	TO ESTIMATE CVP	
28	Unequal Pulses		

11:00 3-4 ICS PLAX



SS Notch



1:00 3-4 ICS PSAX



APICAL 4C



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



Original Contribution

Ultrasound assisted evaluation of chest pain in the emergency department

M. Deborah Colony ^{a,*}, Frank Edwards ^b, Dylan Kellogg ^b



A Aorta: Aneurysm and/or dissection flap

B Bi-ventricular systolic function

C McConnel's sign

D D-shaped left ventricle

E Pericardial Effusion

P Pneumonia, Pneumothorax, Pleural Effusion



GRAZIE PER L'ATTENZIONE



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