



## Simposio inter-societario SIGG-FADOI

# La complessità del malato anziano ricoverato in ospedale

## *Presentazione atipica dei sintomi*

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Presidente Nazionale FADOI

*Firenze, 30 novembre 2007*

# Atypicality

*one of the intellectual challenges  
of the  
clinical medicine of old age*

Sherman FT, Geriatrics 2003

## Modified manifestations

- ✓ *atypical*
- ✓ *non-specific*
- ✓ *insidious onset*
- ✓ *silent existence*
- ✓ *missed diagnosis*



## Modified manifestations

- ✓ *atypical*
- ✓ *non-specific*
- ✓ *insidious onset*

## Altered presentations

- ✓ diminished, absent pain
- ✓ depressed temperature regulation
- ✓ depressed thirst mechanism
- ✓ confusion, restlessness, hallucinations
- ✓ generalized deterioration
- ✓ vague, poorly-defined 'constitutional' symptoms

# Factors complicating assessment in the elderly

## Presence of multiple pathologies

- ✓ 85% have 1 chronic disease, 30% have 3 or more
- ✓ *one system's acute illness*  
stresses other's reserve capacity
- ✓ *one disease's symptoms*  
may mask another
- ✓ *one disease's treatment*  
may mask another symptom

## Polypharmacy

- ✓ too many drugs
- ✓ 30% of geriatric hospitalizations drug-induced

# Characteristics of atypical presentation

- ✓ *personality*
- ✓ *behavior patterns*
- ✓ *higher/lower pain thresholds*
- ✓ *patient with psychiatric/cognitive diseases*

## Communication problems

- ✓ *diminished sight*
- ✓ *diminished hearing*
- ✓ *diminished mental faculties*
- ✓ *depression*
- ✓ *poor cooperation*
- ✓ *limited mobility*

# Characteristics of atypical presentation

- ✓ *personality*
- ✓ *behavior patterns*

- ✓
- ✓

**Do not assume confused  
or disoriented patient  
is "just senile"**

- ✓ *poor cooperation*
- ✓ *limited mobility*

## Error of planning .....

*(wrong plan to achieve aim)*

## Error of execution.....

*(action does not go as intended)*

- *forget to attend for planned consultation*
- *does not notify about lateness*
- *forget to cancel clinical appointment*

- *forgets to report informations*
- *forgets to bring relevant items to consultation*
- *forgets to take treatment*

- *fails to read medication label and instructions*

# Patient safety and patient error

Stephen Buetow, Glyn Elwyn

**Error of planning** .....

*(wrong plan to achieve aim)*

**Error of execution**....

*(action does not go as intended)*

## **Response to illness**

- ✓ seek help for only small part  
of symptoms
- ✓ perceive symptoms as "just getting old"
- ✓ delay seeking treatment

# Epidemiologia dell'IMA nelle ICU in Italia lo studio BLITZ

## Sintomi all'esordio (n = 1.927)

✓ dolore tipico	1.561		81%
✓ dolore atipico	223	19%	11,6%
✓ senza dolore	143		

## Angina prodromica (n 1.259)

✓ angina da sforzo (min < 2 mesi)	150	7.8%
✓ angina a riposo > 48 h	235	12.2%
✓ senza dolore < 48 h	293	15.2%

# Epidemiologia dell'IMA nelle ICU in Italia lo studio BLITZ

## Sintomi all'esordio (n = 1.927)

- ✓
- ✓
- ✓
- ✓ **Anginal equivalents**
  - ✓ shortness of breath
  - ✓ dyspnea, palpitations, syncope, general weakness, dizziness
  - ✓ exercise-induced pain
    - *in the abdominal region, back, jaw, arm - more commonly in the left arm - or shoulder*
- ✓ a
- ✓ a
- ✓ s

## **I MA misconosciuto** - *pazienti a rischio*

- ✓ donne di media età pre/peri-menopausa
- ✓ anziani di entrambi i sessi
- ✓ diabetici
- ✓ drug abusers (cocaina, amfetamine)

## **Mancanza di dolore**

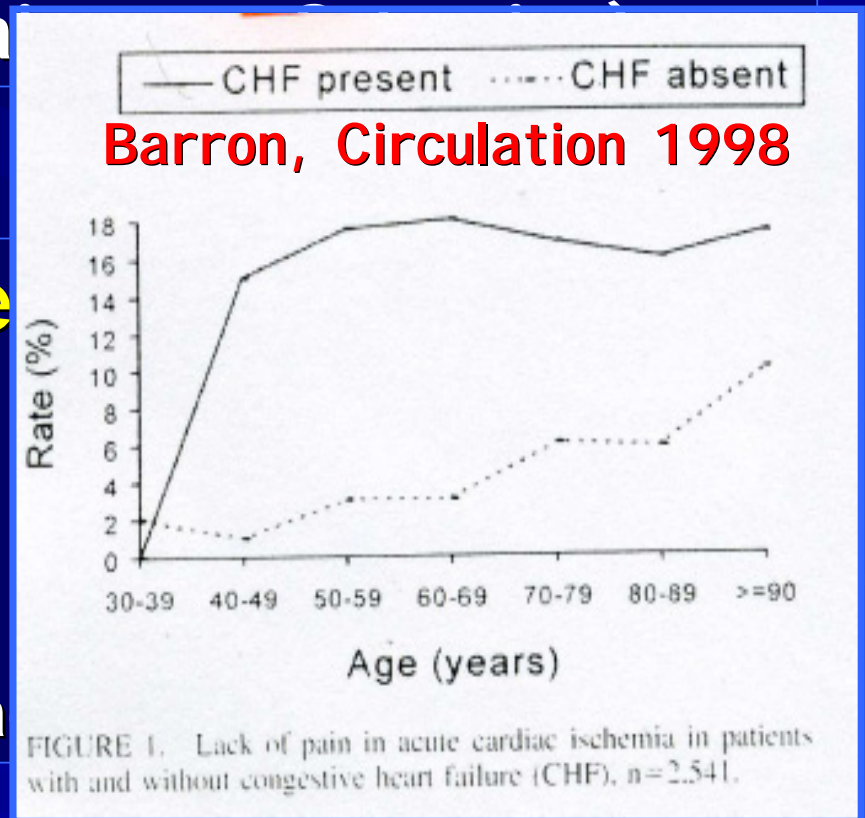
- anziani
- donne
- diabetici
- precedenti IMA
- scompenso cardiaco

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## Mancanza di dolore

- anziani
- donne
- diabetici
- precedenti IMA
- scompenso cardia



# Aronow WS, Geriatrics 2003

in chest pain  
pts with AMI

Study	N°	Age (years)	Unrecognized MI
Rodstein, 1956	52	61-92	31%
Aronow, 1985	115	Mean 82	68%
Aronow, 1987	110	Mean 82	21%
Honolulu Heart Programme	89	Mean 61	33%
Muller, 1990 men	46	65-95	30%
Muller, 1990 women	67	65-95	51%
Nadelmann, 1990		75-85	43%
Sigurdsson, 1995	237	58-62	35%
Sheifer, 2000	901	Mean 72	22%

Gupta, M Ann Emerg Med 2002

## Sintomi associati ad IMA nei pazienti anziani

### Sintomi inusuali di MI

- ✓ dolore mandibolare, odontalgia
- ✓ dolore cervicale
- ✓ dolore addominale e disturbi gastrointestinali  
nausea, vomito, singhiozzo, eruttazioni
- ✓ esacerbazione o nuova insorgenza di scompenso cardiaco
- ✓ dispnea, tosse
- ✓ cardiopalmo e aritmie
- ✓ episodi sincopali, vertigine, tinnito, pallore improvviso,  
sudorazione, cute fredda, 'malore'
- ✓ embolia periferica
- ✓ sintomi/segni di ipo-perfusione periferica
- ✓ alterazione dello stato mentale, delirium
- ✓ ansia, astenia e debolezza generalizzata inspiegata
- ✓ sintomi neurologici focali, TIA, stroke

## HF in elderly patients.....

AHA-ACC

- ✓ *inadequately recognized and treated*
- ✓ *symptoms of HF frequently attributed to ageing*
- ✓ *non invasive cardiac imaging often fails to reveal impaired cardiac function*
- ✓ *HF with a preserved LVEF frequently found*

## HF in elderly patients.....

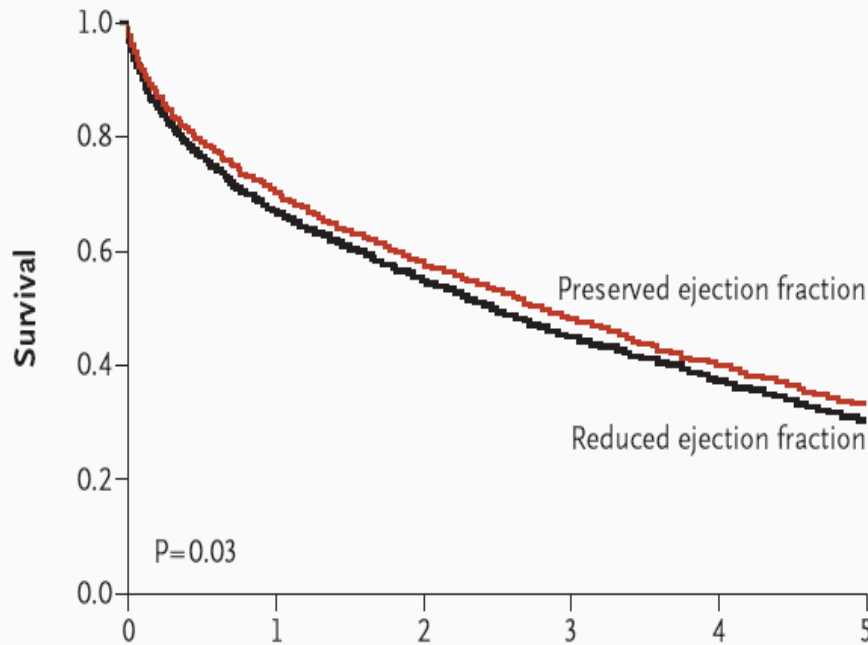
AHA-ACC

- ✓ *inadequately recognized and treated*
- ✓ *symptoms of HF frequently attributed to ageing*

## Congestive Heart Failure

- ✓ may present as **nocturnal confusion**
- ✓ **bed-ridden patients** may have fluid over **sacral areas**, rather than feet or legs

# Trends in Prevalence and Outcome of Heart Failure with Preserved Ejection Fraction



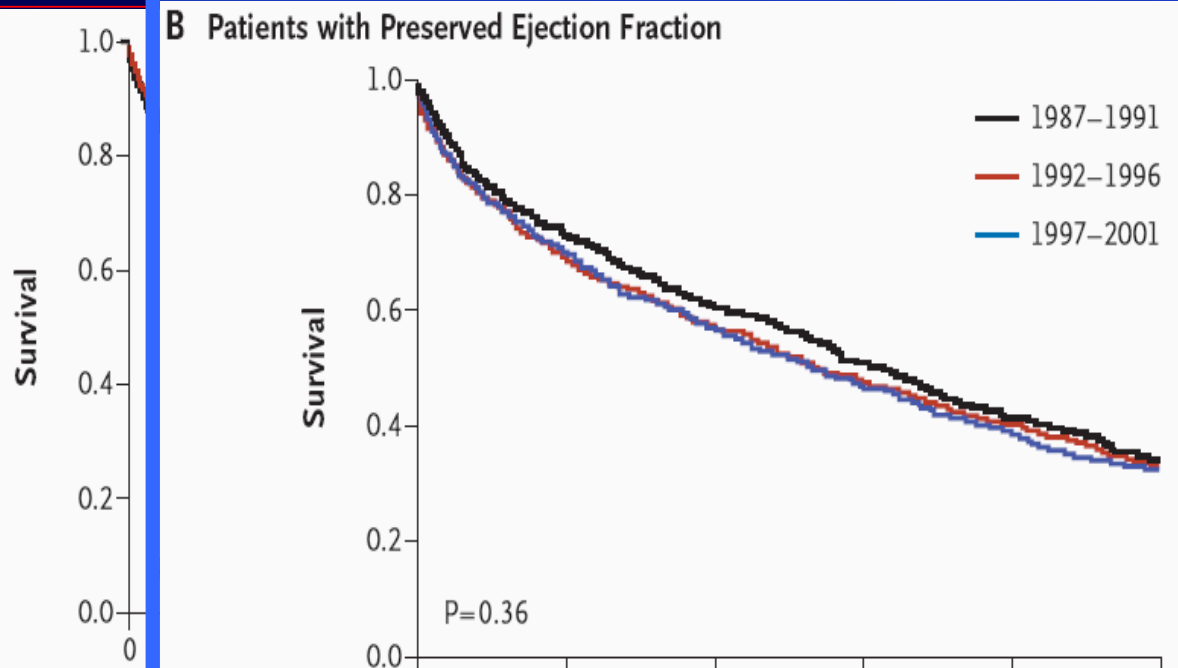
**Kaplan-Meier survival curves for pts with HF and preserved or reduced EF**

**Diastolic Heart Failure — A Common and Lethal Condition by Any Name**

Preserved ejection fraction 2100 1555 1270 1001 758 574

Owan TE, NEJM 2006

# Trends in Prevalence and Outcome of Heart Failure with Preserved Ejection Fraction

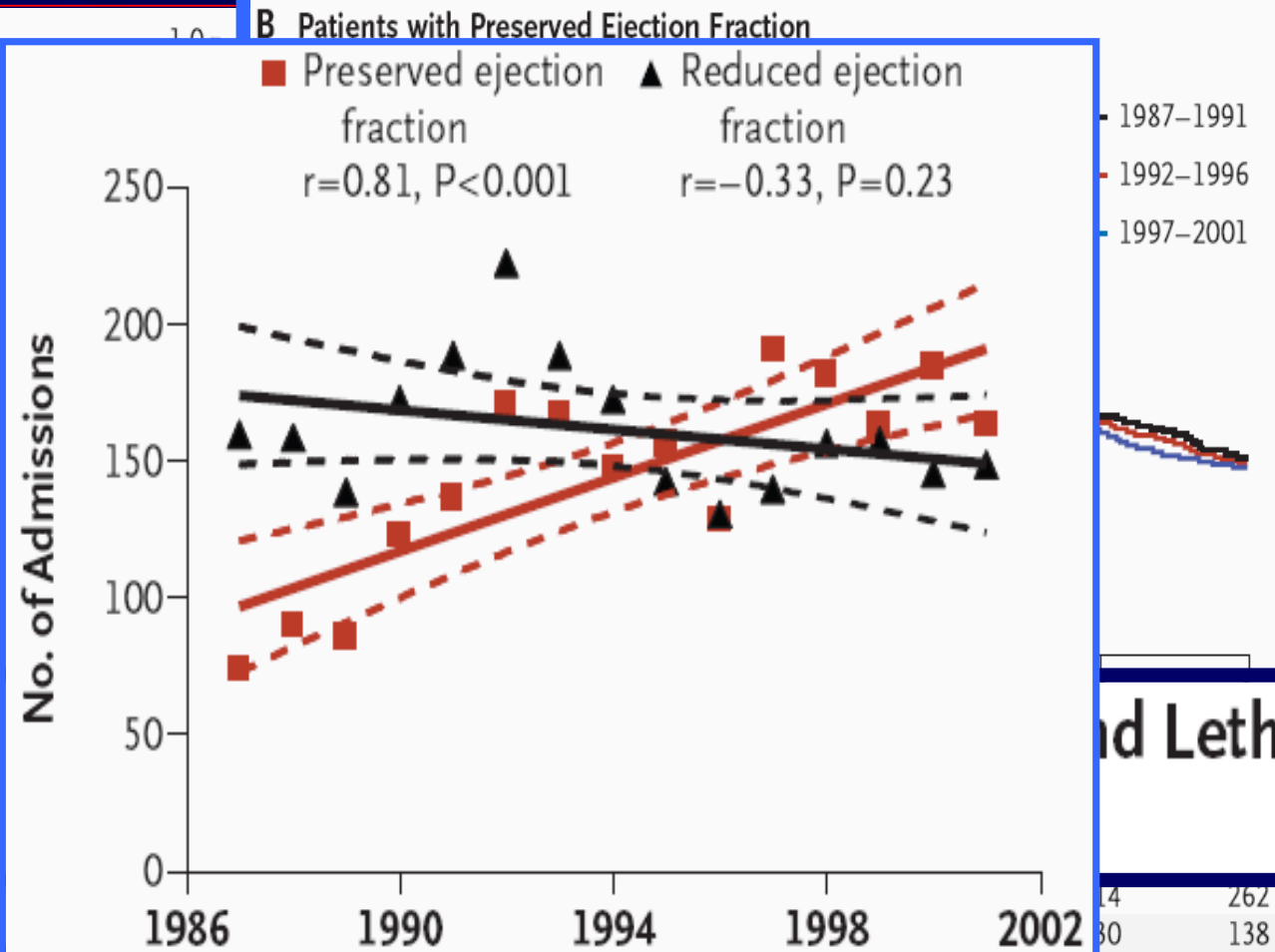


Meyer curves with HF preserved or EF

## Diastolic Heart Failure — A Common and Lethal Condition by Any Name

Preserved ejection fraction	210	771	537	447	375	314	262
		885	629	513	365	230	138

# Trends in Prevalence and Outcome of Heart Failure with Preserved Ejection Fraction



Meyer curves with HF preserved or EF

and Lethal Condition

14	262
30	138

# Understanding “diastolic” heart failure

## Patients with diastolic HF vs. systolic HF

- *tend to be older*
- *more of them are female*
- *more have hypertension*
- *fewer have CAD*
- *show similar rates of DM, AF, renal disease*

## Acute episodes of DHF are often associated with

- *hypertensive episodes*
- *the onset of AF*

# Understanding "diastolic" heart failure

## Patients with diastolic HF vs. systolic HF

- *tend to be older*
- *more of them are female*
- *more have hypertension*

❖ ↓ capacità renale a eliminare  
un carico di acqua e sale

↓ *capacità a tollerare una rapida e abbondante  
somministrazione di liquidi*

*pazienti 'volume sensitive'*

# Pathophysiologic Targets in the Early Phase of Acute Heart Failure Syndromes

## Initial clinical presentation

### “Vascular” Failure

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- High blood pressure
- Rapid worsening
- Pulmonary congestion
- PCWP acutely increased
- Rales: present
- Severe radiographic congestion
- Weight gain minimal
- LVEF relatively preserved
- Response to therapy: relatively rapid

### “Cardiac” Failure

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- Normal blood pressure
- Gradual worsening (days)
- Systemic rather than pulmonary congestion
- PCWP chronically high
- Rales: may be absent
- Radiographic congestion may be absent
- Weight gain significant (edema)
- LVEF usually low
- Response to therapy: continue to have systemic congestion in spite of the initial symptomatic response

# Embolia polmonare

## Background

- Più di **600.000 casi/anno**
  - 60.000-100.000 morti/anno
  - 70% diagnosticati all'autopsia
- *25-35% mortali se non trattati*
- *2-8% mortali anche se trattati*

- è comune
- ti uccide
- ci sfugge
- individuarla fa la differenza

Tabas S, ACEP 2002

Morgenthaler TI, Mayo Clin Proc 1995

# Embolia polmonare

## Background

- Più di 600.000 casi/anno

- *"the silent killer of the elderly"*

- ■ suspect in any patient with **sudden onset of dyspnea** when cause cannot be quickly identified

*trattati*

Tabas S, ACEP 2002

Morgenthaler TI, Mayo Clin Proc 1995

# Embolia polmonare

## Background

- Più di 600.000 casi/anno

*“the silent killer of the elderly”*

Pulmonary embolism should be considered in the differential diagnosis of

*every syncopal event*

that presents to the ED, even in the face of cardiac dysrhythmias and normal pulse oximetry values

Wolfe, J Emerg Med 1998

## embolia polmonare critica e non critica

dispnea	81,7%
dolore toracico	48,8%
tosse	20,3%
<b>sincope</b>	<b>13,6%</b>
emottisi	6,6%

I.CO.P.E.R., Lancet 1997

Non esiste correlazione  
diretta tra gravità del  
quadro clinico e dimensione  
e/o localizzazione dell'embolo

Morgenthaler TI,  
Mayo Clinic Proc 1995

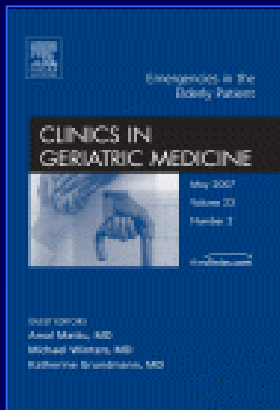
## Embolia polmonare fatale

### SINTOMI

Dispnea	59%
<b>Sincope</b>	<b>27%</b>
Stato mentale alterato	20%
Ansia	17%
Dolore toracico	10%
Sudorazione	9%
Dolore pleuritico	8%

### SEGNI

RR > 16/m	66%
Tachicardia	54%
Rantoli	42%
T° > 37.8°	30%
Edemi declivi	26%
<b>Ipotensione improvvisa</b>	<b>20%</b>
Cianosi	12%



# venous thromboembolic disease in the elderly patient *atypical, subtle and enigmatic*

■ *traditional vital sign abnormalities found in patients who have VTE may be absent in the older patient, and presentations such as isolated syncope without chest pain or dyspnea are common*

■ *by having an appreciation for the subtle and atypical presentations of VTE, they will be in a position to significantly lower morbidity and mortality in the older patients*

# venous thromboembolic disease in the elderly patient

Emergencies in the Elderly Patient

CLINICS IN GERIATRIC MEDICINE

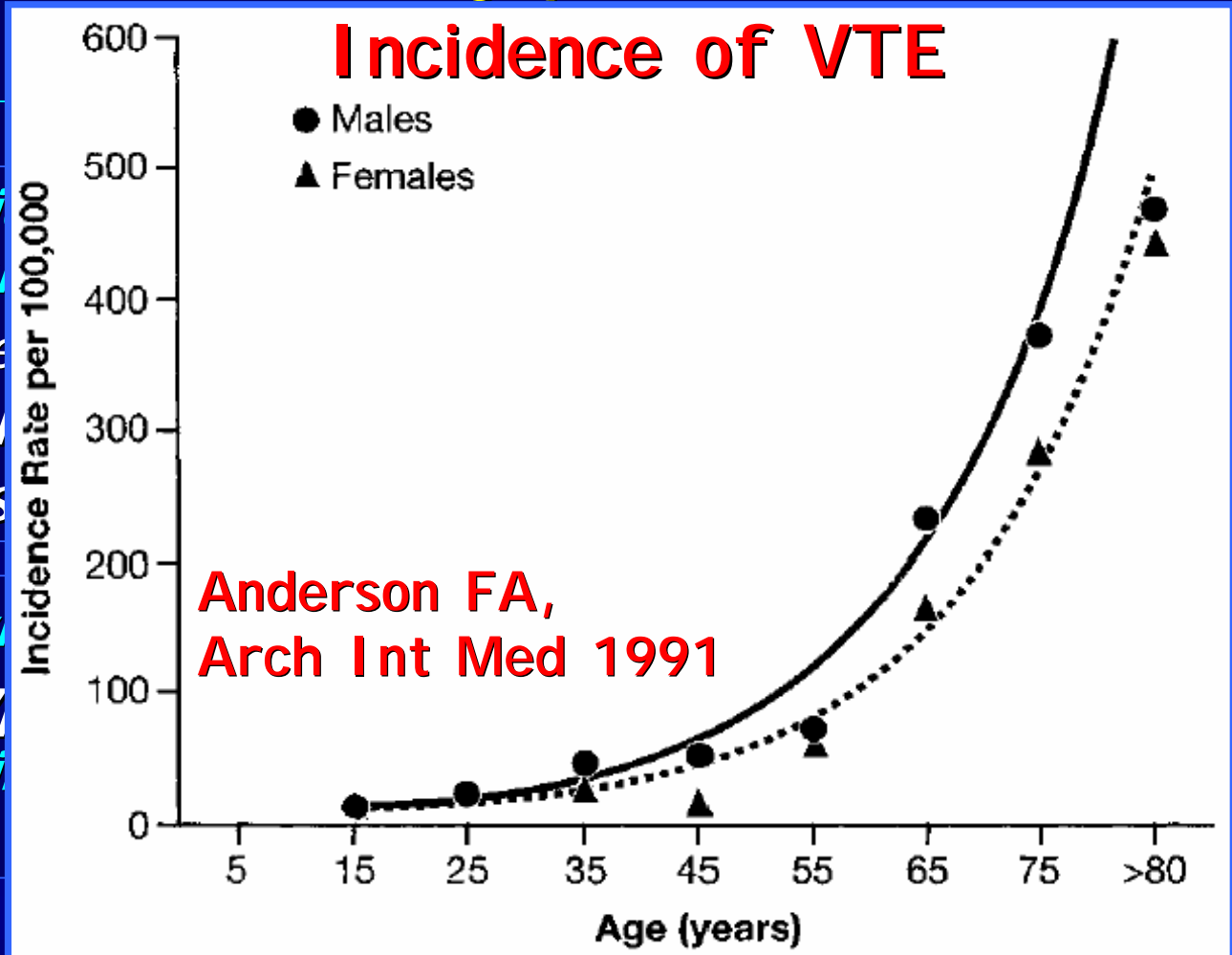


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Guest Editors:  
Amel Maitou, MD  
Michael Weintraub, MD  
Ruthanne Brundman, MD

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# The atypical presentation of infection in old age

Berman P, Age and Ageing 1987

# 'Absent or blunted temperature' nelle infezioni dell'anziano

- *meccanismi fisiopatologici non completamente chiariti*
- *ridotta risposta termoregolatoria*
- *alterazioni quali/quantitative sia nella produzione che nella risposta dei pirogeni endogeni (IL-1, IL-6, TNF)*
- *disfunzione ipotalamica circum-ventricolare*

# Pneumonia

## *atypical signs & symptoms*

- *decline in mental status: confusion, disorientation, lethargy*
- *decline in functional status*
- *weight loss, nutritional deficits*
- *anorexia, nausea, vomiting*
- *complaints of weakness*
- *delayed or low grade fever*
- *no typical signs of the disease*
- *symptoms often vague, mirror those of other chronic conditions*

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  - *no typical signs of the disease*
  - *symptoms often vague, mirror those of other*
- *delay in diagnosis and/or therapy*
  - *higher risk of dying*

# Appendicitis with perforation 'a remind to internist'

## Unusual presentation of appendicitis

- pseudoneoplastic/progressive sigmoid narrowing
- acute urinary retention, scrotal abscess, vaginal discharge, pyelo-ureteral dilatation/hydronephrosis, perinephric abscess, bladder tumor with painless gross hematuria
- delirium, falls
- migratory pain, recurrent/chronic

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**Geriatric acute perforated appendicitis**  
*atypical symptoms lead to a difficult diagnosis*

Majeski J, South Med J 1998

# Atypical presentation of abdominal pathologic conditions

*high risk patients - geriatric people*

- *frequently elderly patients with acute surgical abdomens present with normal temperature and leukocytes count*
- ✓ *approximately **only 14%** of the patients older than 50 years with appendicitis had generalized pain and tenderness*
- ✓ *rebound tenderness is less likely in elderly patients with appedicitis*

# Atypical presentation of abdominal pathologic conditions

*high risk patients - geriatric people*

Has misdiagnosis of appendicitis decreased over time?

- among 63,707 non-incident appendectomy patients, *84.5% had appendicitis and 25.8% with perforation*
- the incidence of misdiagnosis *increased 8% yearly* in patients older than 65 years
- *common misdiagnoses include gastroenteritis, pelvic inflammatory disease or UTI*

Flum DR, JAMA 2001

# Spondylitis and Spondylodiscitis

*Back pain in an elderly man*

*more than 'just a fall'*

- ✓ **pazienti a rischio:** anziani, diabetici, neoplastici, HIV+, immunodepressi, emopatici, valvulopatici, ustionati, m. Crohn fistolizzato, SAPHO Syndrome
- ✓ **procedure invasive:** cateterismo vescicale, cateterismo venoso/arterioso, biopsia prostatica, anestesia spinale, terapia antalgica epidurale, rachicentesi, interventi chirurgici extrarachidei (splenectomia, pancreatectomia)

# Spondylodiscitis

- ✓ in a survey of over 2.5 years, 22 cases of septic discitis were identified, suggesting an *annual incidence of 2/100.000/years*
- ✓ *73% of patients were aged 65 years*
- ✓ in *91% of patients back pain* was the presenting symptom, with *neurological signs evident in 45% of patients*
- ✓ fever  $> 37.5^{\circ}$  C was present in 68% of patients and a marked **elevation of ESR in 91%**
- ✓ elevated serum leukocyte count lacked diagnostic sensitivity

Hopkinson N, QJM 2001

Friedman JA, Surg Neurol 2002

# Pitfalls

- ✓ vertebral osteomyelitis mimicking  
chronic pancreatitis  
Dig Dis Sci 1996
- ✓ cervical spine infection presenting as angina  
Hosp Med 1999
- ✓ bacterial endocarditis revealed  
by infectious discitis  
Rev Rheu Engl Ed 1996
- ✓ brucella spondylitis mimicking lumbar  
disc herniation  
Paraplegia, 1995

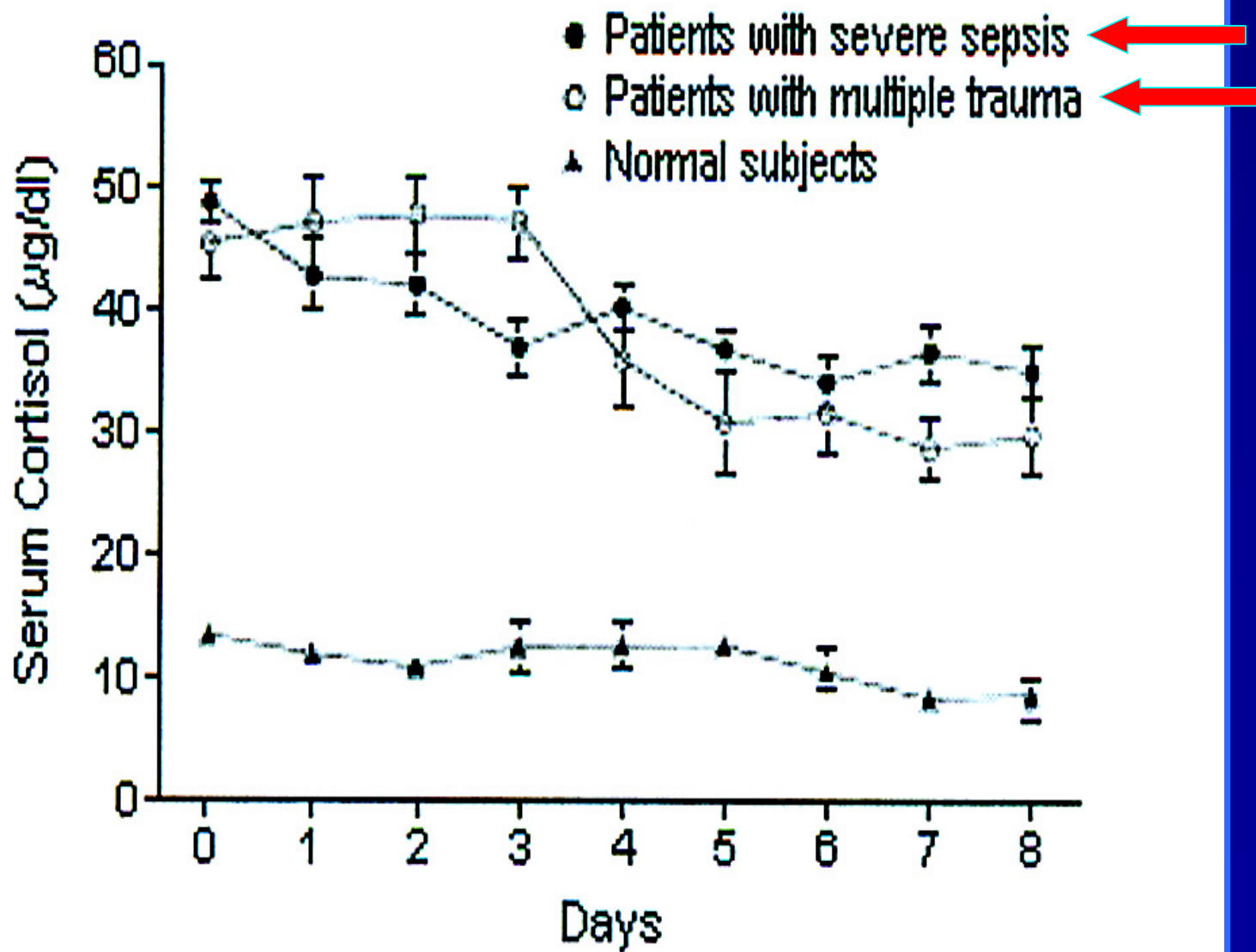
# Sepsis

## A) TYPICAL SYMPTOMS OF SEPSIS IN ELDERLY::

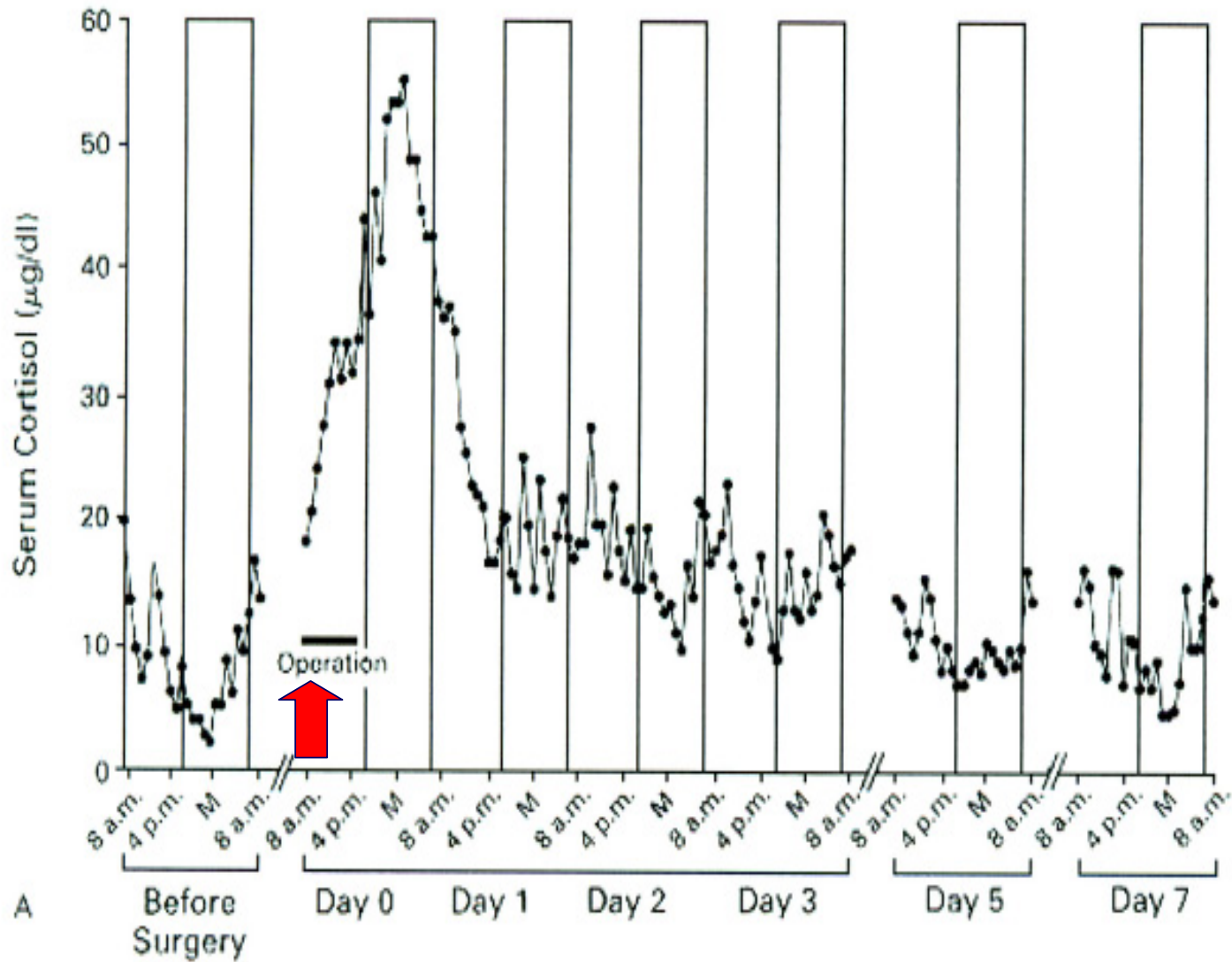
- CHANGE IN MENTAL STATUS(50%)
- CHANGE IN FUNCTIONAL STATUS
- anorexia
- falls
- blood sugar alteration

B) Sources of infection: urinary(27-44%), respiratory(20%), abdominal(20%)

C) Reasons for failure: age > 85, neutropenia, S aureus, lower resp. inf., patients not treated with the appropriate antibiotic within the first 24 hours.



# Cortisolemia dopo intervento chirurgico

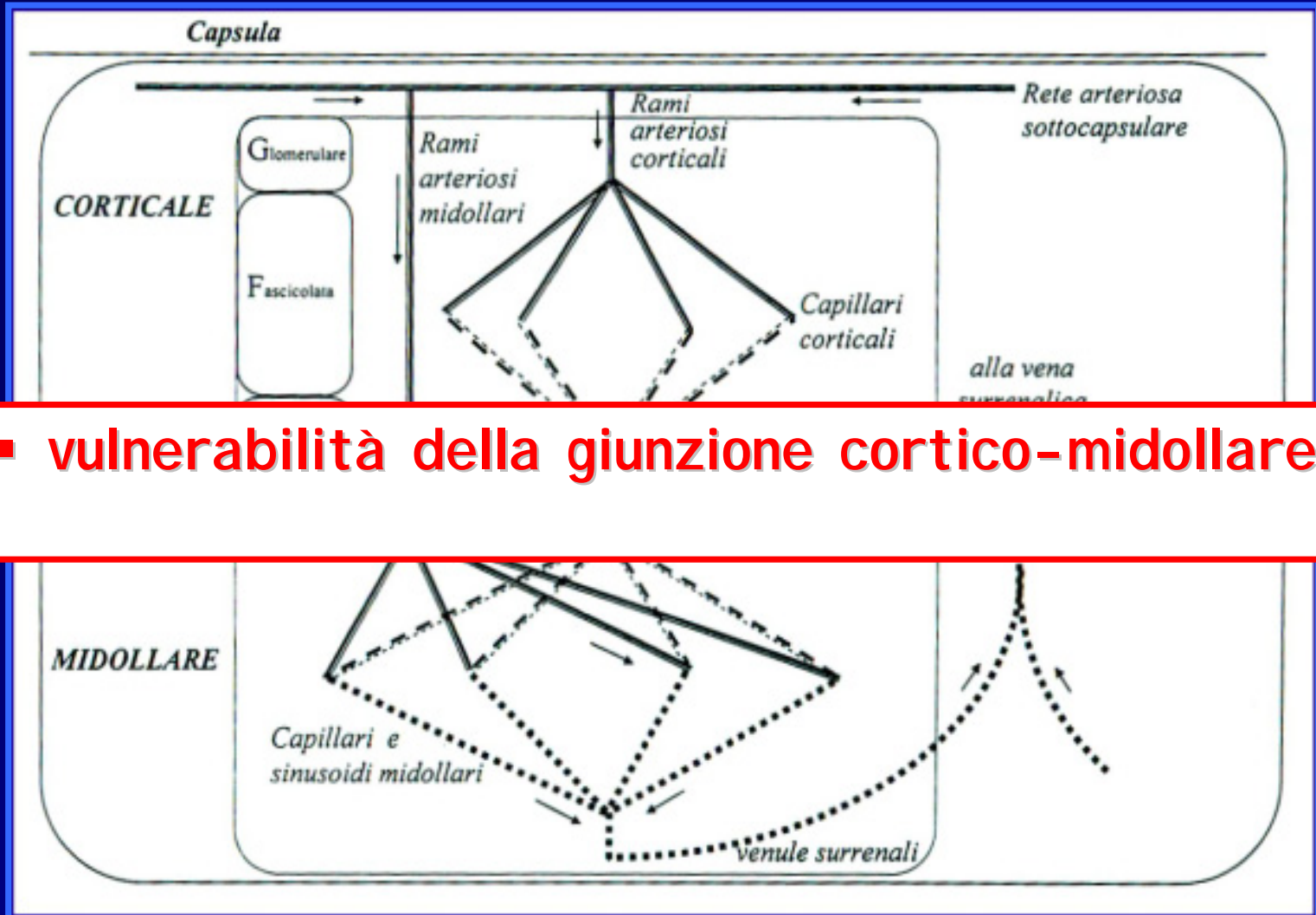


# Insufficienza Surrenalica Acuta

- squilibrio tra richieste dell'organismo vs. capacità di secrezione dei surreni
- *emergenza medica*
- *è da prendere sempre in considerazione in caso di sincope o shock ndd*

*"It continues to be difficult to diagnose corticosteroid insufficiency in patients with critical illness"*

# meccanismi patogenetici



- vulnerabilità della giunzione cortico-midollare

## fattori favorenti farmaco-correlati

- ✓ aumentato metabolismo del cortisolo  
*rifampicina, fenitoina, fenobarbitale*
- ✓ inibizione della steroidogenesi  
*ketoconazolo, amino-glutetimide, taxani, alcaloidi della vinca*

- vulnerabilità della giunzione cortico-midollare



# Ipo-surrenalismo acuto

## forme cliniche

- **FORMA PSEUDO-CARDIACA**  
*ipotensione, shock ipo-volemico, sincope*
- **FORMA PSEUDO-COLERICA**  
*vomito, disidratazione, ipotermia*
- **FORMA PSEUDO-APOPLETTICA**  
*agitazione, convulsioni, coma, febbre*
- **FORMA PSEUDO-PERITONITICA**  
*dolori addominali, resistenza addominale, vomito*
- **FORMA FULMINANTE**  
*ipovolemia acuta*

# Insufficienza Surrenalica Acuta

## Quando sospettarla?

### SEGNI OBIETTIVI

- iperpigmentazione
- **ipotensione arteriosa**
- tachicardia
- perdita di peli
- vitiligo
- amenorrea
- intolleranza al freddo

### SINTOMI

- debolezza e fatica
- anoressia, nausea, vomito
- dolori addominali/lombari
- mialgie, artralgie
- vertigini posturali/ **sincope**
- 'craving' verso il sale
- cefalea, confusione, agitazione
- perdita di memoria
- depressione
- febbre, sudorazione, disidratazione

# Insufficienza Surrenalica Acuta

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### QUADRO CLINICO

- **instabilità emodinamica (stato iper-dinamico)**
- **'infiammazione' progressiva senza fonti evidenti**
- **disfunzione multi-organo (IRA)**
- **ipoglicemia**

zione

# Hyperthyroidism

Elderly may present with the above symptoms but the **atypical** symptoms are more common:

**-tremor:** -usually not present but if present  
*coarse*

**-skin:** -no change

**-perspiration** -no change

**-eyes** -occasional ophthalmopathy usually no change

**-bowels** -no change, occasionally the “joyful” relief from constipation.

# Hyperthyroidism

*Elderly may present with the above symptoms but the **atypical** symptoms are more common:*

Apathetic hyperthyroidism:

- Depression
- Apathy
- Placid Facies

(Mimics depression or parkinsonism)

# Hyperthyroidism in the elderly vs young

## D) SYMPTOMS:

### TYPICAL IN YOUNG:

- fine tremor
- skin: moist smooth
- increased perspiration
- ophthalmopathy
- bowel frequency

### WHAT ARE THE TYPICAL SYMPTOMS OF HYPERTHYROIDISM IN THE ELDERLY?:

- anorexia
- weight loss-----usually quite significant
- muscle wasting primarily in proximal muscles
- change in cardiovascular functioning:

### cardiac presentations of hyperthyroidism

- new or worsening CHF-----60%
- atrial fibrillation-----40%
- new or worsening angina-----20%

# Atypical signs and symptoms in elderly patients with hypothyroidism

- *confusion*
- *behavioral changes*
- *macrocytic anemia*
- *peripheral neuropathy*
- *dementia-like behavior*
- *memory impairment*
- *myopathy*
- *depressed affect*
- *muscle weakness*

R Rizzolo, "Thyroid disease," in Primary Care Geriatrics: A Case-Based Approach  
R J Ham, P D Sloane, eds (St Louis: Mosby-Year Book, 1997) 447-455

# Geriatric Abuse & Neglect

## ■ Contributing factors

- advanced age: average mid-80s
- multiple chronic diseases
- patient lacks total dependence
- sleep pattern disturbances leading to nocturnal wandering, shouting
- family has difficulty upholding commitments

## ■ Primary findings

- Trauma  
inconsistent with history
- History that changes with multiple tellings

# 10 Principles of Geriatric Emergency Medicine

- 1) **presentation is often complex**
- 2) common diseases present **atypically**
- 3) **co-morbidity** must be considered
- 4) **polypharmacy** is common
- 5) **cognitive impairment** must be recognized
- 6) **tests** may have different normals - **variability**
- 7) **decreased reserve** must be recognized
- 8) **support systems** may not be adequate
- 9) **baseline functional status** must be known
- 10) **psychosocial issues** must be addressed

# 10 Principles of Geriatric Emergency Medicine

1) presentation is often complex

2)

3)

4)

5)

6)

7)

8)

9)

10)

*Tieni a mente le malattie  
che veramente contano*

*e comincia da quelle  
che possono essere fatali*

*J.W. Hurst*