SOCIETÀ ITALIANA DI GERONTOLOGIA E GERIATRIA

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Il delirium I/II

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Delirium nell’anziano

- **Il Delirium è un comune e complicato disordine nei pazienti anziani ospedalizzati e nei residenti nelle RSA.**
- **Il Delirium è caratterizzato da modifiche delo stato di coscienza e cognitivo, a rapida insorgenza e andamento fluttuante.**
- **E’ spesso causato d apatologie acute, fratture, interventi chirurgici, farmaci o astinenza da farmaci o droghe.**
- **Il Delirium negli anziani ospedaizzati è una condizione potenzialmente prevenibile e trattabile ma il fatto che sia scarsamente riconosciuto determina outcome modesti.**
- **Le conseguenze del delirium son una prolungata ospedalizzazione, aumentata istituzionalizzazione e più elevata mortalità sia durante il ricovero che a lungo termine.**

La difficoltà diagnostica è un problema che riguarda tutta l'equipe sanitaria e non soltanto alcune figure.
I medici spesso omettono la diagnosi ed i sintomi e i segni di delirium sono riportati nelle cartelle mediche solo nel 30-50% dei casi

Gustafson et al., 1991; Fick e Foreman, 2000

Studi italiani riportano nelle SDO di reparti internistici il delirium anche in percentuali di 1,5% in pz. ultra75enni.

Epidemiology

Delirium is common in hospitals and nursing homes.
At admission to hospital 10-20 % of elderly (+65) have delirium, and 10-30% develop delirium while at hospital

• Elderly in medical departments	10-48%
• Elderly patients in surgical department	7-52%
• Elderly patients with hip fractures	30-50%
• Elderly patients with stroke	13–50%
• Elderly after coronary surgery	23-34%
• Patients in ICU (all ages)	40%
• Nursing home patients	20-40%
• Elderly patients in ICU (McNicoll, JAGS 2003)	70%
• Elderly in a SICU (Ranhoff, Aging 2006)	30%

DELIRIUM
definizione sec. DSM IV

1) Disturbo dello stato di coscienza (ridotta consapevolezza dell'ambiente) con ridotta capacità di fissare, mantenere e spostare l'attenzione.

2) Alterazioni della sfera cognitiva (deficit di memoria, disorientamento S/T, disturbi del linguaggio) non giustificabili da una demenza preesistente o in evoluzione.

3) Il disturbo si manifesta in un periodo di tempo breve (di solito ore e giorni*) ed ha un decorso fluttuante nel corso della giornata

4) Evidenza che il disturbo è una diretta conseguenza di patologia medica in corso, intossicazione da farmaci o sdr. da astinenza.

*** fino a sei mesi**

SINONIMI DI DELIRIUM

- **Stato confusionale acuto**
- **Sindrome organica cerebrale**
- **Encefalopatia tossica**
- **Encefalopatia metabolica**
- **Psicosi tossica**
- **Psicosi endogena**
- **Sundowning syndrome (variazioni circadiane della coscienza)**

Lira (latin): track

De lirium: off the track

The Confusion Assessment Method (CAM)

Variabili	**Punteggio** **1 presente** **0 assente**
1 Insorgenza acuta e andamento fluttuante c'è stato un cambiamento acuto nello stato mentale del paziente rispetto alla sua situazione di base? Il comportamento anormale varia durante la giornata, per esempio va e viene o si modifica di intensità?	
2. Perdita dell'attenzione Il paziente presenta difficoltà nel concentrare la sua attenzione, per esempio è facilmente distraibile, non riesce a mantenere il filo del discorso ecc.?	
3. Disorganizzazione del pensiero Il pensiero del paziente è disorganizzato e incoerente, passa da un argomento all'altro senza filo logico, in modo imprevedibile?	
4. Alterato livello di coscienza 0=vigile 1=iperallerta, letargia, stupor, coma	
La diagnosi di delirium richiede la presenza di 1, 2 ed alternativamente 3 o4	TOT:__

The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

CURRENT CONCEPTS

Delirium in Older Persons

Sharon K. Inouye, M.D., M.P.H.

N Engl J Med 2006;354:1157-65.

Delirium = poor outcome!

- **LOS doubled**

  Gustafson 1988, Williams-Russo 1992, Jitapunkul 1992, Levkoff 1992, Marcantonio 1994, O'Keeffe and Lavan 1997, McCusker 2003
- **Institutional care 2.8 –7.3 times more frequent**
  Francis 1990, Jitapunkul 1992, Levkoff 1992, Marcantonio 1994, George 1997, O'Keeffe and Lavan 1997
- **Mortality increased**
  Francis 1990, Jitapunkul 1992, Francis and Kapoor 1992, Pompei 1994, George 1997, McCusker 2002
  - **In hospital 8-35% (vs 1-8%)**
  - **At 6 mos 15-31% (vs 10-15%)**
  - **At 12 mos 38-48% (vs 14-21%)**
  - **At 5 years 72% (vs 35%) (Hip fractures, Lundstrøm 2003)**

Epidemiology based on the use of diagnostic criteria (DSM-IV, CAM, ICD-10 etc.)

- Different prevalence and incidence when different diagnostic criteria are used
- **Prevalent delirium**: delirium diagnosed at admission to hospital
- **Incident delirium:** delirium developed during hospital stay

Table 1. Clinical Features of Delirium.*

- Acute onset
  - Occurs abruptly, usually over a period of hours or days
  - Reliable informant often needed to ascertain the time course of onset
- Fluctuating course
  - Symptoms tend to come and go or increase and decrease in severity over a 24-hour period
  - Characteristic lucid intervals
- Inattention
  - Difficulty focusing, sustaining, and shifting attention
  - Difficulty maintaining conversation or following commands
- Disorganized thinking
  - Manifested by disorganized or incoherent speech
  - Rambling or irrelevant conversation or an unclear or illogical flow of ideas
- Altered level of consciousness
  - Clouding of consciousness, with reduced clarity of awareness of the environment
- Cognitive deficits
  - Typically global or multiple deficits in cognition, including disorientation, memory deficits, and language impairment
- Perceptual disturbances
  - Illusions or hallucinations in about 30 percent of patients
- Psychomotor disturbances
  - Psychomotor variants of delirium
    - Hyperactive
      - Marked by agitation and vigilance
    - Hypoactive
      - Marked by lethargy, with a markedly decreased level of motor activity
    - Mixed
- Altered sleep–wake cycle
  - Characteristic sleep-cycle disturbances
  - Typically daytime drowsiness, nighttime insomnia, fragmented sleep, or complete sleep-cycle reversal
- Emotional disturbances
  - Common
  - Manifested by intermittent and labile symptoms of fear, paranoia, anxiety, depression, irritability, apathy, anger, or euphoria

* Additional details are provided in Table 2 in the Supplementary Appendix.

Il personale infermieristico, generalmente più a contatto con i pazienti e quindi in grado di cogliere meglio le alterazioni tipiche del delirium, documenta il 60-90% dei sintomi del delirium, ma soltanto quando questo è di tipo ipercinetico.

La tendenza a non rilevare il delirium ipocinetico probabilmente è da correlarsi al fatto che il paziente affetto da questa forma non attira su di sé l'attenzione, e pertanto non è "problematico" per lo staff

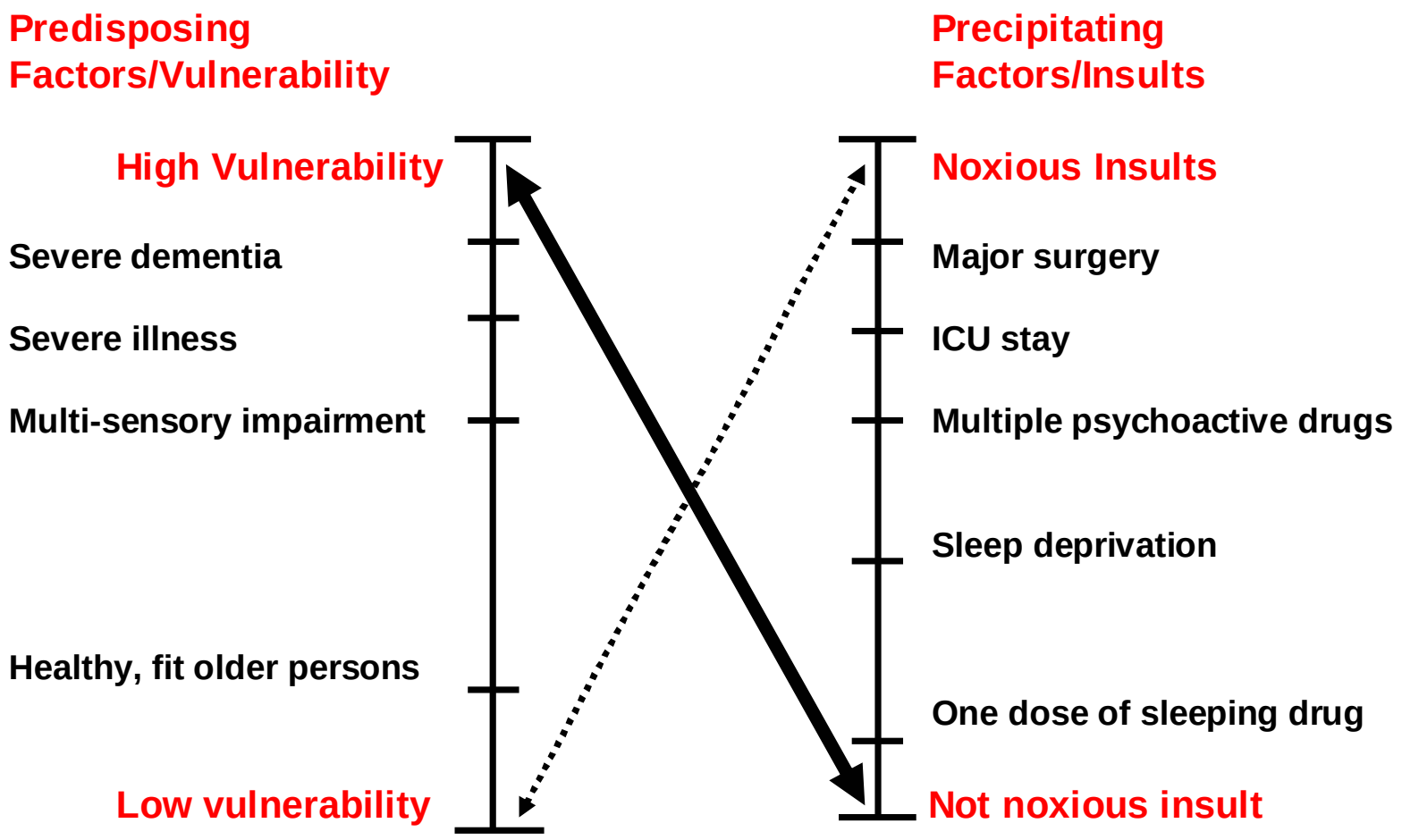

Predisposing Factors/Vulnerability
Precipitating Factors/Insults
High Vulnerability
Severe dementia
Severe illness
Multi-sensory impairment
Healthy, fit older persons
Low vulnerability
Noxious Insults
Major surgery
ICU stay
Multiple psychoactive drugs
Sleep deprivation
One dose of sleeping drug
Not noxious insult

Table 2. Predisposing Factors for Delirium.

Demographic characteristics
Age of 65 years or older
Male sex
Cognitive status
Dementia
Cognitive impairment
History of delirium
Depression
Functional status
Functional dependence
Immobility
Low level of activity
History of falls
Sensory impairment
Visual impairment
Hearing impairment
Decreased oral intake
Dehydration
Malnutrition
Drugs
Treatment with multiple psychoactive drugs
Treatment with many drugs
Alcohol abuse
Coexisting medical conditions
Severe illness
Multiple coexisting conditions
Chronic renal or hepatic disease
History of stroke
Neurologic disease
Metabolic derangements
Fracture or trauma
Terminal illness
Infection with human immunodeficiency virus

Table 3. Precipitating Factors or Insults That Can Contribute to Delirium.

Drugs
Sedative hypnotics
Narcotics
Anticholinergic drugs
Treatment with multiple drugs
Alcohol or drug withdrawal
Primary neurologic diseases
Stroke, particularly nondominant hemispheric
Intracranial bleeding
Meningitis or encephalitis
Intercurrent illnesses
Infections
Iatrogenic complications
Severe acute illness
Hypoxia
Shock
Fever or hypothermia
Anemia
Dehydration
Poor nutritional status
Low serum albumin level
Metabolic derangements (e.g., electrolyte, glucose, acid–base)
Surgery
Orthopedic surgery
Cardiac surgery
Prolonged cardiopulmonary bypass
Noncardiac surgery
Environmental
Admission to an intensive care unit
Use of physical restraints
Use of bladder catheter
Use of multiple procedures
Pain
Emotional stress
Prolonged sleep deprivation

Lo stato di salute premorboso

- Non disabile (BADL=0/6)
- Non demente (MMSE≥18)

- Disabile (BADL=1+/6)

- Demente (MMSE<18)

- Disabile (BADL=1+/6)
- Demente (MMSE<18)

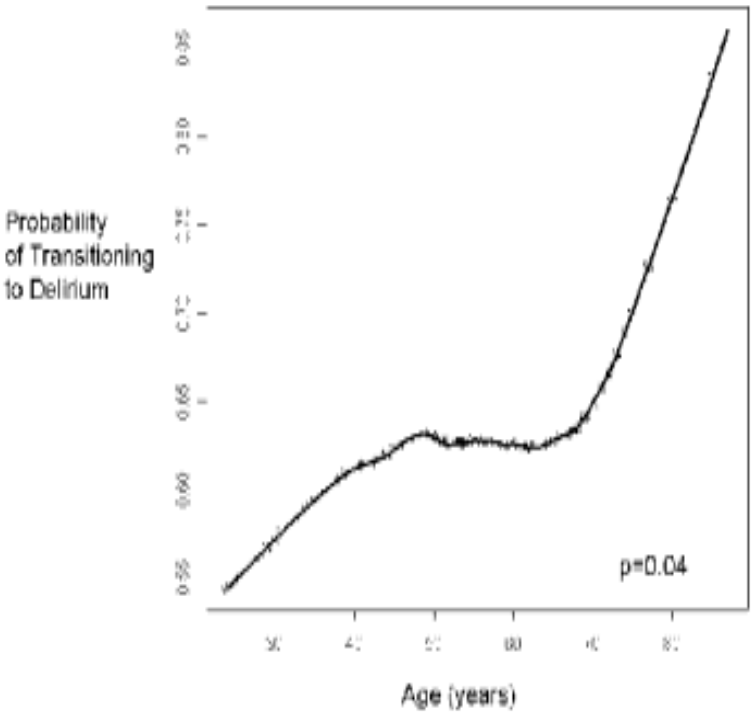
Problematica del Delirium su Demenza

(DSD)

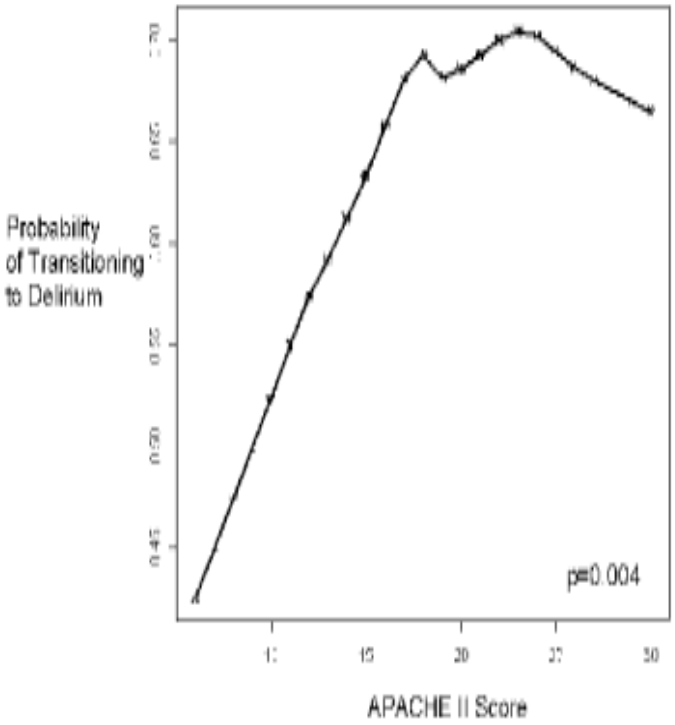
**In uno studio nel quale erano stati
inclusi pazienti con e senza decadimento cognitivo, hanno dimostrato
che mentre tutti i familiari intervistati erano stati in grado di
riconoscere un cambiamento dello stato mentale nel proprio congiunto,
nella stragrande maggioranza dei casi (88%)
il delirium ipocinetico non era stato riconosciuto
dal personale sanitario, medico o infermieristico.**

Fick e Foreman, 2000

Età e probabilità di sviluppare delirium in ICU



Gravità di malattia e probabilità di sviluppare delirium in ICU



Pandharipande P., Anesthessiology, 2006

Delirium as a Predictor of Mortality in Mechanically Ventilated Patients in the Intensive Care Unit

JAMA

E. Wesley Ely, MD, MPH, Ayumi Shintani, PhD, MPH, Brenda Truman, RN, MSN, Theodore Speroff, PhD, Sharon M. Gordon, PsyD Frank E. Harrell, Jr, PhD Sharon K. Inouye, MD, MPH Gordon R. Bernard, MD Robert S. Dittus, MD, MPH

Objective To determine if delirium is an independent predictor of clinical outcomes,including 6-month mortality and length of stay among ICU patients receiving mechanical ventilation.

Design, Setting, and Participants Prospective cohort study enrolling 275 consecutivemechanically ventilated patients admitted to adult medical and coronaryICUs of a US university-based medical center between February 2000 and May 2001.

Patients were followed up for development of delirium over 2158 ICU days using the Confusion Assessment Method for the ICU and the Richmond Agitation-Sedation Scale.

Main Outcome Measures Primary outcomes included 6-month mortality, overall hospital length of stay, and length of stay in the post-ICU period. Secondary outcomeswere ventilator-free days and cognitive impairment at hospital discharge.

Results Of 275 patients, 51 (18.5%) had persistent coma and died in the hospital. Among the remaining 224 patients, 183 (81.7%) developed delirium at some point during the ICU stay. Baseline demographics including age, comorbidity scores, dementia scores, activities of daily living, severity of illness, and admission diagnoses were similar between those with and without delirium (*P*_.05 for all). Patients who developed delirium had higher 6-month mortality rates (34% vs 15%, *P*=.03) and spent 10 days longer in the hospital than those who never developed delirium (*P*_.001).

After adjusting for covariates (including age, severity of illness, comorbid conditions, coma, and use of sedatives or analgesic medications), delirium was independently associated with higher 6-month mortality (adjusted hazard ratio [HR], 3.2; 95% confidence interval [CI], 1.4-7.7; *P*=.008), and longer hospital stay (adjusted HR, 2.0; 95% CI, 1.4-3.0; *P*_.001). Delirium in the ICU was also independently associated with a longer post-ICU stay (adjusted HR, 1.6; 95% CI, 1.2-2.3; *P*=.009), fewer median days alive and without mechanical ventilation (19 [interquartile range, 4-23] vs 24 [19- 26]; adjusted *P*=.03), and a higher incidence of cognitive impairment at hospital discharge (adjusted HR, 9.1; 95% CI, 2.3-35.3; *P*=.002).

Conclusion: Delirium was an independent predictor of higher 6-month mortality and longer hospital stay even after adjusting for relevant covariates including coma, sedatives,and analgesics in patients receiving mechanical ventilation.

Practice Guideline for the Treatment of Patients With Delirium

American Psychiatric Association

Am J Psychiatry, 1999

- **trattamento della condizione determinante l’insorgenza del delirium**

- **percorsi di supporto favorenti azioni sull’ambiente e sul riorientamento**

- **trattamento farmacologico**

Practice Guideline for the Treatment of Patients With Delirium

American Psychiatric Association

Am J Psychiatry, 1999

SOMATIC INTERVENTIONS

The primary treatment of symptoms of delirium is largely pharmacological. *Antipsychotic medications* are often the pharmacological treatment of choice (I).

Haloperidol is most frequently used because it has few anticholinergic side effects, few active metabolites, and a relatively small likelihood of causing sedation/ipotension. It may be administered orally, IM, or IV and may cause fewer extrapyramidal symptoms when administered IV.

Table 4. Pharmacologic Treatment of Delirium.

Class and Drug	Dose	Adverse Effects	Comments
Antipsychotic			
Haloperidol	0.5–1.0 mg twice daily orally, with additional doses every 4 hr as needed (peak effect, 4–6 hr) 0.5–1.0 mg intramuscularly; observe after 30–60 min and repeat if needed (peak effect, 20–40 min)	Extrapyramidal symptoms, especially if dose is >3 mg per day Prolonged corrected QT interval on electrocardiogram Avoid in patients with withdrawal syndrome, hepatic insufficiency, neuroleptic malignant syndrome	Usually agent of choice Effectiveness demonstrated in randomized, controlled trials[20,37] Avoid intravenous use because of short duration of action
Atypical antipsychotic			
Risperidone	0.5 mg twice daily	Extrapyramidal effects equivalent to or slightly less than those with haloperidol Prolonged corrected QT interval on electrocardiogram	Tested only in small uncontrolled studies Associated with increased mortality rate among older patients with dementia
Olanzapine	2.5–5.0 mg once daily		
Quetiapine	25 mg twice daily		
Benzodiazepine			
Lorazepam	0.5–1.0 mg orally, with additional doses every 4 hr as needed*	Paradoxical excitation, respiratory depression, oversedation	Second-line agent Associated with prolongation and worsening of delirium symptoms demonstrated in clinical trial[37] Reserve for use in patients undergoing sedative and alcohol withdrawal, those with Parkinson's disease, and those with neuroleptic malignant syndrome
Antidepressant			
Trazodone	25–150 mg orally at bedtime	Oversedation	Tested only in uncontrolled studies

* Intravenous use of lorazepam should be reserved for emergencies.

Inouje S, NEJM, 2006

Strategie di riabilitazione del delirium

- un ambiente idoneo aiuta a migliorare le performances cognitive e funzionali del soggetto con delirium

- Delirium Care Package

- per i familiari è prevista una brochure che sintetizza le caratteristiche cliniche del delirium, le sue cause e le strategie di prevenzione e management

- suggerimenti per la riabilitazione delle funzioni cognitive.

Delirium Care Package

Costituito da:

- **un calendario (1 giorno per ogni pagina scritto in caratteri grandi)**
- **un orologio da posizionare sopra la testata del letto**

Obiettivi principali

- Riconoscimento del delirium da parte dell’equipe
- Riduzione della durata del delirium
- Riduzione delle sequele del delirium


Paziente critico
Ambiente critico

Incoraggiare la prevenzione del delirium significa aumentare la qualità delle cure nei pazienti anziani

Primary prevention of delirium is probabily the most effective treatment strategy

Inouye SK, N Engl J Med 1999