

SERVIZIO SANITARIO REGIONALE  
EMILIA-ROMAGNA  
Azienda Ospedaliero - Universitaria di Ferrara



**Società Medico Chirurgica di Ferrara**

**18 Marzo 2017**

**Infettivologia : una disciplina in evoluzione  
Introduzione**

**Marco Libanore**

Unità Operativa Complessa Malattie Infettive  
Azienda Ospedaliera – Universitaria Ferrara

# Genesi di una Disciplina

## Medicina Interna

De Ritis  
Giunchi  
Zanussi  
Campanacci  
Butturini

## Pediatria

Tolentino  
Rossolini  
Gotti

## Patologia

Colonnello

## Ex novo

Elio Guido Rondanelli

**Infettivologia**

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graph TD; MI[Medicina Interna] --> I[Infettivologia]; P[Pediatria] --> I; Pat[Patologia] --> I; EN[Ex novo] --> I;
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# Impatto clinico in Italia

- **Anni '70** : epatite virale B e NANB > grandi aree metropolitane legata alla tossicodipendenza ;
- **1977** : Identificazione virus difettivo HDV;
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- **2010** : Antimicrobial Stewardship ;
- **2015** : DAA per epatite virale cronica C ;
- **2017** : "Terapia antibiotica di precisione"

INCIDENZA ED ASPETTI CLINICI DELL'EPATITE B NEI TOSSICO-  
DIPENDENTI NEL PERIODO AGOSTO '80-DICEMBRE '82

M. LIBANORE - P. MONTANARI - A. BEDETTI - I. POLTRONIERI - F. RAVENNA  
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Arcispedale S. Anna - Ferrara - Divisione di Malattie Infettive e Servizio di Gastroenterologia  
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ESTRATTO



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Divisione di Malattie Infettive (Primario: *Dr. F. Ghinelli*); \* Laboratorio di Analisi chimico-cliniche e  
microbiologia (Primario: *Prof. M. Ferrucci*); \*\* Presidio Pneumologico Multizonale USL 31 - Ferrara  
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PER LO STUDIO DELLE MALATTIE  
INFETTIVE E PARASSITARIE  
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# CONVEGNO INTERREGIONALE LEGIONELLOSI OGGI



**FERRARA**

24 GIUGNO 1988  
Centro Congressi - Via Bologna, 534

ATTI

a cura di F. Ghinelli, M. Libanore

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new potential danger to the long-suffering Angolan people, and we certainly welcome regional and international cooperation to strengthen our resources, especially in the microbiological studies.

Luis Bernardino, Vitoria Espirito Santo, Rafaela Pereira Santos  
Paediatric Department, Medical School of Luanda, Hospital Josina Machel, CP 3067,  
Luanda, Angola

- 1 Issacson M, Canter PH, Effler P, Arntzen L, Bomans P, Hoeman R.  
Haemorrhagic colitis epidemic in Africa. *Lancet* 1993; 341: 901.

### "Tombstoning" of ST segment in acute myocardial infarction

SIR—Elevation of the ST segment is one of the earliest indicators of acute myocardial infarction, although it may occur in other causes of myocardial ischaemia.<sup>1</sup> Various shapes of the ST segment in myocardial ischaemia have been described, but the prognostic value in acute infarction has not been assessed. The term "tombstoning" is used by experienced junior doctors to describe a certain shape of the ST segment in the electrocardiograms (ECGs) of patients with acute myocardial infarction and is noted on admission in some cases. This provocative term is often used to communicate to colleagues a grave prognosis of the patient in question.

The tombstoning ST segment has some striking characteristics (figure). The ST segment is convex upwards and has a fast rise-time, and these changes are seen in all the leads that have ST segment elevation. The peak of the convex ST segment is often higher than the preceding R wave, which is of short duration (often less than 0.04 s) and small in amplitude. The ST segment merges with the ascending limb of the following T wave and therefore the T wave cannot be identified separately. Inversion of the T wave is not noted in tombstoning tracings.

To evaluate the significance of this observation, I examined ECGs of 100 consecutive patients admitted with a history of acute myocardial infarction to intensive care in a district general hospital. The diagnosis was confirmed by rising titre of cardiac enzymes (aspartate aminotransferase) over 3 consecutive days. 37 subjects were excluded because they had normal enzyme concentrations. The remaining 63 were divided into two groups according to the shape of the ST segment: tombstoning (n=6) and usual ST changes (n=57). Prognosis was assessed according to the number of complications that occurred during the first 7 days of hospital stay. Complications monitored were: hypotension on admission (systolic blood pressure <90 mm Hg), significant fall in blood pressure (>30% of admission pressure), ventricular or supraventricular tachyarrhythmias, ventricular ectopic beats of more than 15 per

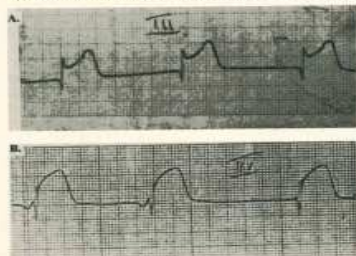


Figure: A = usual ST segment elevation, B = tombstoning

min, complete heart block or new development of bundle-branch block, cardiogenic shock as indicated by need to administer dopamine, hospital stay longer than 7 days because of complications, and death during first 7 days.

All 6 patients with tombstoning ECGs had three or more complications. 4 died within 7 days. Only 16 (28%) patients with normal ST changes had two or more complications, and 2 of these patients died. Those who had complications but no tombstoning showed a varying degree of ST segment elevation. 9 patients with no significant ST segment change had no complications. The difference between the two groups, as assessed by Fisher's exact test, was significant ( $p=0.001$ ).

This preliminary study supports the notion that tombstoning may be a sign of bad prognosis in patients with acute myocardial infarction. Awareness of this variation may help save lives by prompt action. It could be argued that tombstoning is merely the presentation of a "hyper-acute state" or early change of the ST segment after myocardial infarction. However, the patients with these specific ST changes at admission have a poor prognosis. The mechanism of this particular ST change is difficult to explain, but it is likely to represent extensive and rapid myocardial damage after the ischaemic episode. Although there was a statistically significant difference between the groups, numbers were small and not well balanced.

H S K Wimalaratna

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- 1 Goldberger AL, ed. ST segment elevation: ischaemic causes. In: *Electrocardiographic differential diagnosis*. St Louis, Mosby, 1975: 111.

### Rhodococcus equi pneumonia and occult HIV infection

SIR—*Rhodococcus equi* has been reported to cause cavitary pneumonia in patients with HIV infection.<sup>1</sup> We report a case of *R equi* pneumonia in an elderly person.

A 71-year-old single man, was admitted with a 2 month history of malaise, asthenia, intermittent fever, non-productive cough, progressive dyspnoea, anorexia, and weight loss (8 kg). He denied homosexuality. A chest radiograph showed a solid mass with cavitation in the right upper lobe and left parahilar infiltrate. Titres of antibody to legionella, mycoplasma, coxiella, and chlamydia and screening for respiratory viruses, were negative. Cytological examination of his sputum revealed abundant polymorphonuclear leucocytes and microorganisms suggestive of normal oropharyngeal flora. The patient refused bronchoscopy. After 10 days of ceftazidime (3 g daily) and amikacin (1 g daily), both intravenously, his condition deteriorated. On direct questioning, he said he had had homosexual experience. After counselling he was tested for HIV antibody and found to be positive (enzyme-linked immunosorbent assay and western blot). New cultures of sputum and blood showed numerous colonies of gram-positive pleomorphic rods, which were identified as *R equi*. The patient denied any contact with foals, horses, or farm animals during the months before admission. The CD4+ lymphocyte count was 20/ $\mu$ L. The patient was treated with erythromycin (2 g), rifampicin (600 mg), and ciprofloxacin (400 mg), all daily and intravenously. 2 weeks later clinical and radiological improvement was seen, although repeated cultures of sputum and blood were positive for *R equi* and a chest radiograph still showed right upper lobe pneumonia with cavitation. After 2 weeks progressive respiratory insufficiency developed and the patient died. No necropsy was done.

*R equi* pneumonia should be considered in patients with cavitating chest infections and/or atypical pulmonary in-

filtrates, even when there are no apparent risk factors for HIV infection. The reluctance of older homosexuals to tell of high-risk behaviour might mean they will die without HIV infection being diagnosed.

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Florio Ghinelli*

Department of Infectious Diseases and Microbiology, Archispedale S Anna,  
Ferrara, Italy

- 1 Harvey RL, Sunstrum JC. *Rhodococcus equi* infection in patients with and without human immunodeficiency virus infection. *Rev Infect Dis* 1991; 13: 139–45.

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Short communication

### Antimicrobial stewardship programmes in Emilia-Romagna, Italy

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*Area Rischio infettivo, Agenzia sanitaria e sociale regionale dell'Emilia-Romagna, Viale Aldo Moro 21, I-40127, Bologna, Italy*

Members of the Antimicrobial Stewardship Study Group of Regione Emilia-Romagna are Massimo Arlotti, Silvio Bassi, Lucia Bertozzi, Morena Borsari, Claudio Cancellieri, Rossella Carletti, Bianca Caruso, Stefano Giordani, Marco Libanore, Giacomo Magnani, Massimiliano Marchi, Patrizia Marchegiano, Elisa Mazzini, Sergio Mezzadri, Manuela Minghetti, Silvano Nola, Cristina Puggioli, Pietro Ragni, Giovanna Ratti, Marzio Sisti, Cristina Vandelli, Pierluigi Viale and Pietro Vitali.

# Tematiche

- 8.15** Registrazione Partecipanti
- 8.30** Saluto della Presidente della Società Medico Chirurgica di Ferrara *R. Manfredini*  
Saluto delle Autorità
- 8.50** Introduzione: **M. Libanore**  
**Moderatori:** *C. Contini (Fe), M. Gallerani (Fe), P. Pazzi (Fe)*
- 9.00** I successi a lungo termine della terapia antiretrovirale  
*L. Sighinolfi (Fe)*
- 9.20** Il ritardo di diagnosi dell' infezione da HIV: come intervenire  
*C. Mussini (Mo)*
- 9.50** La prevenzione: quale futuro? *D. Segala (Fe)*
- 10.10** Terapia dell' epatite virale cronica C: risultati di un anno con i nuovi farmaci ad azione antivirale diretta (DAA)  
*S. Boccia, S. Carradori, A. Grilli (Fe)*
- 10.30** Discussione
- 10.45** Coffee Break
- Moderatori:** *P.M. Antonioli (Fe), R. Cultrera (Fe), S. Nola (Fe), M.R. Rossi (Fe)*
- 11.00** Meningite: storia di un' epidemia *F. Mazzotta (Fi)*
- 11.30** La gestione razionale della terapia antibiotica in Ospedale e sul Territorio. *A. Pan (Cr)*
- 12.00** La Tuberculosis tra Ospedale e Territorio: novità e problematiche gestionali *M. Lodi, R. Mantovani, R. Bicocchi (Fe)*
- 12.30** Prospettive in infettivologia *M. Libanore (Fe)*
- 12.45** Discussione
- 13.00** Conclusione dei lavori e compilazione questionari ECM



