

Osteonecrosi dei Mascellari: prevenzione, diagnosi e trattamento *UPDATE 2009*

23 giugno 2009, Alessandria



IL TRATTAMENTO DELLA ONJ: *i trattamenti conservativi*

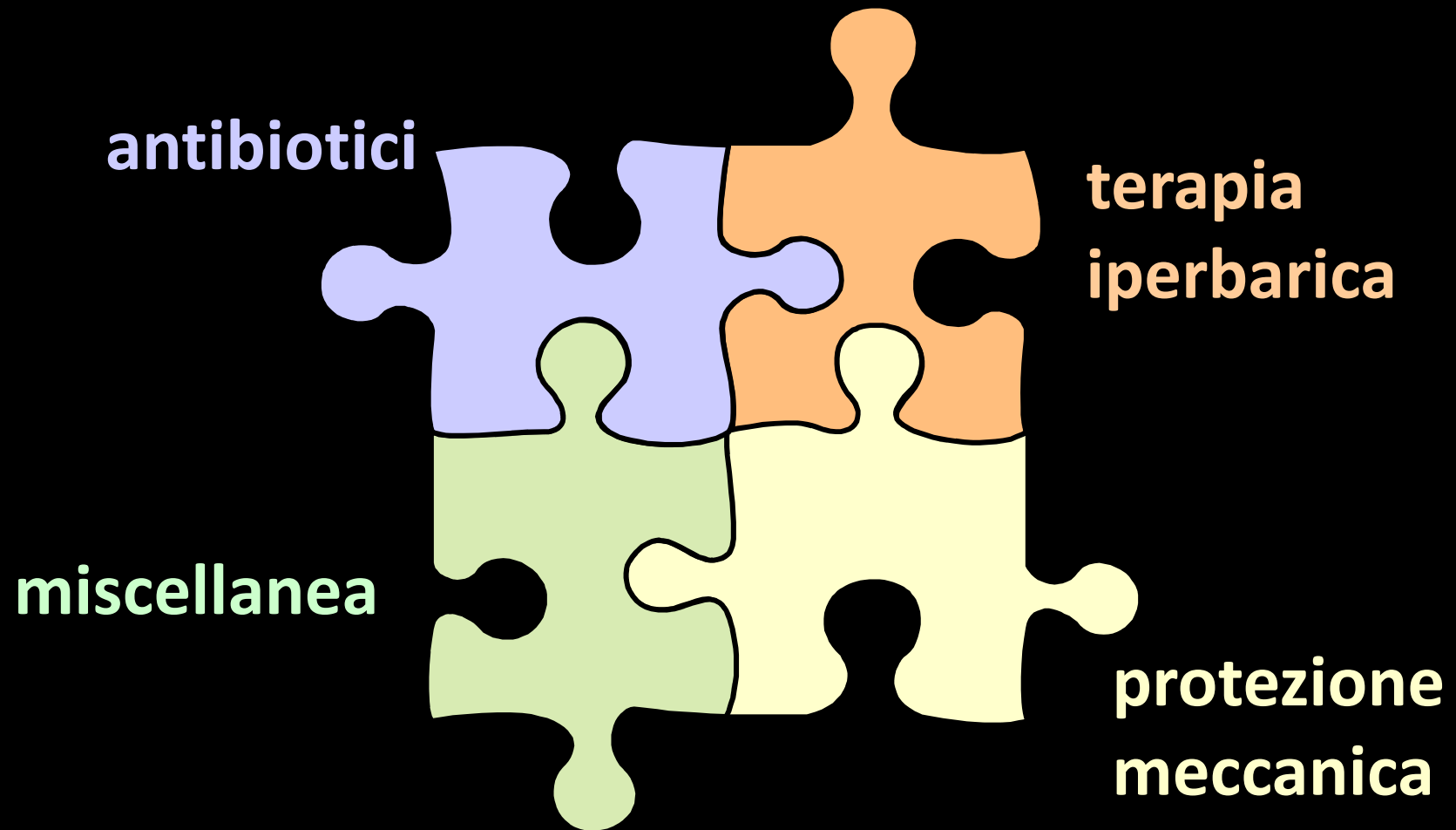


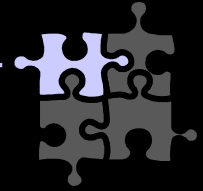
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BRONJ and Infection: It Is There but Does It Contribute to the Pathophysiology?

Numerous bacteria have been reported in patients with BRONJ, yet there is nearly a universal presence of *Actinomyces*.^{68,86,87,102} *Actinomyces* species, most commonly *Actinomyces israelii*, are the most prominent of the over 500 microflora in the oral cavity.¹⁰³

Through their formation of a biofilm on the bone/tooth/mucosal surface, *Actinomyces* perpetuate the adherence of other microflora, which results in a heterogeneous population of bacteria primed for the development of infection.¹⁰³ Despite the presence of these bacterial conglomerates in many patients with BRONJ, there is no clear evidence to address the question of whether infection is a primary or secondary event in BRONJ pathophysiology.



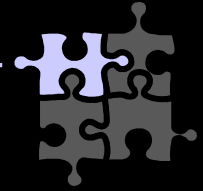
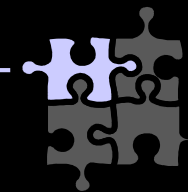


Table 1

Recommendations for bisphosphonate patients.⁷

Pain	Deal with appropriately
Infection	Topical chlorhexidine. Systemic antibiotics if infection (penicillin; levofloxacin; doxycycline; azithromycin; metronidazole)
Surgical treatment	Maintain an infection-free oral environment Should be delayed or be conservative Remove sharp edges to stop soft tissue trauma Remove loose bony sequestra Segmental jaw resection for symptomatic patients with large segments of necrotic bone or pathological fracture
Altering bisphosphonate therapy regimen	Some experts suggest stopping bisphosphonate therapy in cancer patients with established ONJ
Other considerations	Nutritional supplements important e.g. tube feeding Hyperbaric oxygen effectiveness not established

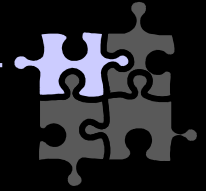




Quali antibiotici?

Antibiotico	Dosaggio (x os)	Note
amoxicillina	3 gr/die	<i>"...long-term and sometimes permanent..."</i> RE Marx J Oral Maxillofac Surg, 2005
metronidazolo	1.5 gr/die	Aggiungere nei casi refrattari o maggiormente sintomatici RE Marx J Oral Maxillofac Surg, 2005
ciprofloxacina + metronidazolo	1 gr/die 1.5 gr/die	Nei pazienti allergici alle penicilline RE Marx J Oral Maxillofac Surg, 2005
eritromicina + metronidazolo	1.2 gr/die 1.5 gr/die	





Quanto sono efficaci gli antibiotici?

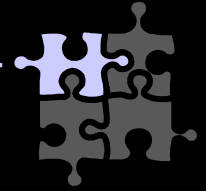
25-33% % di soggetti con risoluzione dei processi infettivi e riduzione del dolore

J Bagan Oral Oncology, 2009

21% % di soggetti con risoluzione dei processi infettivi e riduzione del dolore
(3 pazienti su 14, follow-up 2 mesi)

FR Pires Oral Dis, 2005





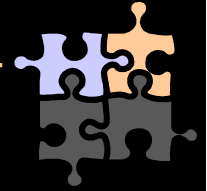
Quanto sono efficaci gli antibiotici?

90.1%

% di soggetti con risoluzione dei processi infettivi, riduzione del dolore, nessuna frattura, nessuna necessità di modificare l'antibiotico
(82 pazienti su 97, follow-up di ≥ 1 anno)

RA Marx J Oral Maxillofac Surg, 2005





Ossigeno-terapia iperbarica

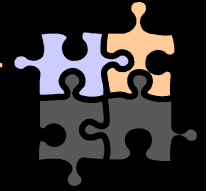
Aumento della diffusione tissutale di O₂:

- migliora l'azione dei leucociti nelle infezioni,
- aumenta la disponibilità di O₂ non trasportato dall'Hb,
- accelera l'eliminazione dei gas inerti.

Aumento della disponibilità di molecole di O e N attive:

- riduzione dell'edema,
- riduzione dell'infiammazione,
- mobilizzazione di cellule staminali,
- formazione di molecole anti-ossidanti.





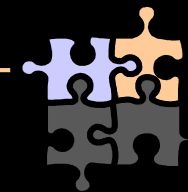
ONJ da bifosfonati

↓ attività e funzione
degli osteociti

Ossigeno-terapia iperbarica

↑ attività e longevità
degli osteociti

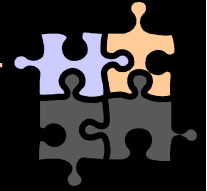




Quanto è efficace la terapia iperbarica?

Autore	Rivista	Dolore	Guarigione
JJ Freiburger	<i>J Oral Maxillofac Surg, 2005</i>	+	+
MD Mignogna	<i>J Clin Oncol, 2006</i>	+	+/-
K Shimura	<i>Int J Hematol, 2006</i>	+	+
KM Soileau	<i>J Periodontol, 2006</i>	+	+/-
CY Lee	<i>J Oral Implantol, 2007</i>	+	+
G Magopoulus	<i>Am J Otolaryngol, 2007</i>	+	+
E Nastro	<i>Acta Haematol, 2007</i>	-	-
SK Krumar	<i>J Contemp Dent Pract, 2008</i>	+	n.d.





Quanto è efficace la terapia iperbarica?

? Terapia iperbarica somministrata in casi differenti per gravità, sospensione si/no del farmaco, patologia di base.

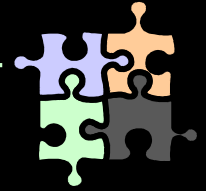
? Terapia iperbarica somministrata insieme ad antibiotici, pre- o post- interventi chirurgici minori e/o maggiori.

? *Case report o case series*: nessun studio prospettico disponibile.

Duke University: studio randomizzato controllato, 70 pazienti, 24 mesi *follow-up*, valutazione *bio-marker*.

University of Minnesota: studio randomizzato controllato, 60 pazienti, 8 settimane *follow-up*.





Ormone paratiroideo, vit. D, fattori di crescita...

MV Rao et al.,

Int J Mol Med 2009, 23:407-13

Effects of platelet-derived growth factor, vitamin D and parathyroid hormone on osteoblasts derived from cancer patients on chronic bisphosphonate therapy

RP Harper and E Fung

J Oral Maxillofac Surg 2007, 65:573-580

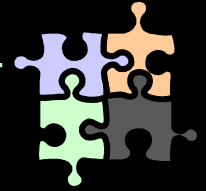
Resolution of bisphosphate-associated osteonecrosis of the mandible: possible application for intermittent low-dose parathyroid hormone

CY Lee et al.,

J Oral Implant 2007, 33:371-382

Use of platelet-rich plasma in the management of oral bisphosphonates associated osteonecrosis of the jaw: a report of 2 cases





Ormone paratiroideo

J Oral Maxillofac Surg
65:573-580, 2007

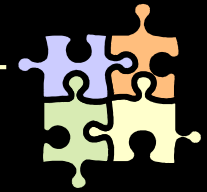
Resolution of Bisphosphonate-Associated Osteonecrosis of the Mandible: Possible Application for Intermittent Low-Dose Parathyroid Hormone [rhPTH(1-34)]

Richard P. Harper, DDS, PhD, FRCD(C), and
Eugene Fung, MD, FRCP(C)†*

Quest'ormone incrementa la densità ossea, ripristina la microarchitettura ossea e sviluppa il diametro dei frammenti ossei.

Somministrazione intermittente di 20 µgr s.c. del frammento ricombinante di ormone paratiroideo [(rhPTH(1-34))], per < 24 mesi (*carcinogenesi!*).





OSTEONECROSIS ASSOCIATED WITH SHORT-TERM ORAL ADMINISTRATION OF BISPHOSPHONATE

Yuki Takagi, DDS,^a Yasunori Sumi, DDS, PhD,^b and Atsushi Harada, MD, PhD^c

National Center for Geriatrics and Gerontology, Obu, Aichi, Japan

Orally administered bisphosphonates are generally considered a first-line medication for treatment of osteoporosis. As a side effect of bisphosphonates, osteonecrosis of the jaws (ONJ) has been reported worldwide. Most reports of osteonecrosis are attributed to the use of bisphosphonates administered intravenously for the treatment of bone disorders such as multiple myeloma. However, osteonecrosis has also been diagnosed in patients receiving oral bisphosphonates. The management of a patient with spontaneous removable partial denture prosthesis-related ONJ associated with short-term oral administration of bisphosphonate is described. (J Prosthet Dent 2009;101:289-292)

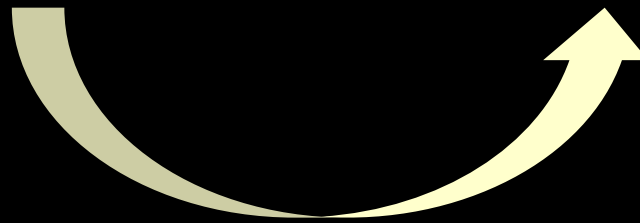
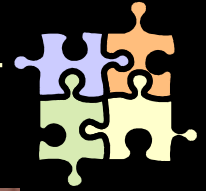
Prosthetic treatment during active osteonecrosis related to radiation and bisphosphonate therapy: A clinical report

Mark Marunick, DDS, MS,^a and Sara Gordon, DDS, MS^b

Wayne State University School of Medicine, Department of Otolaryngology - Head and Neck Surgery, Detroit, Mich; University of Detroit Mercy School of Dentistry, Department of Diagnostic Sciences, Detroit, Mich

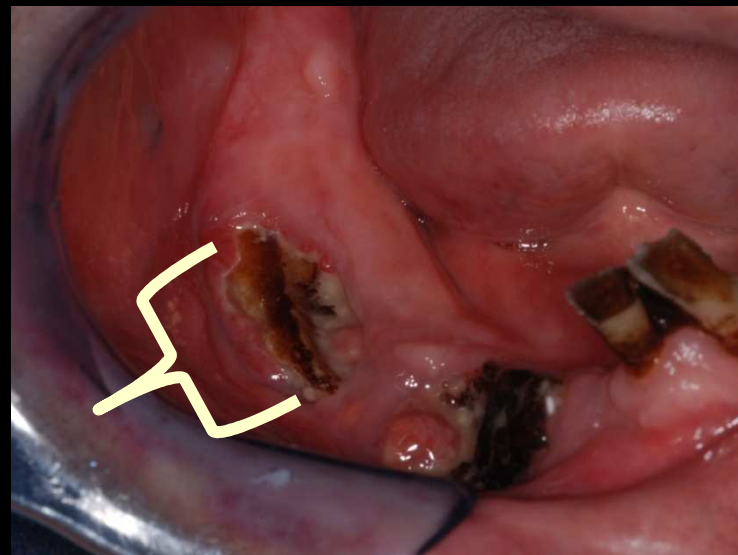
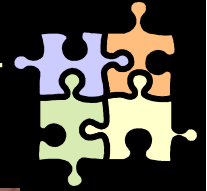
Osteonecrosis of the jaws following the use of bisphosphonate drugs has been reported in the literature. Presently, there is limited evidence to establish guidelines for the prosthetic management of patients with active osteonecrosis, a history of osteonecrosis, or medical history of using these medications. This clinical report reviews the current literature regarding bisphosphonate use, and reports the prosthetic treatment of an edentulous patient with active osteonecrosis who had a history of oral bisphosphonate use and jaw irradiation. (J Prosthet Dent 2006;96:7-12.)





Rifacimento protesi parziale rimovibile

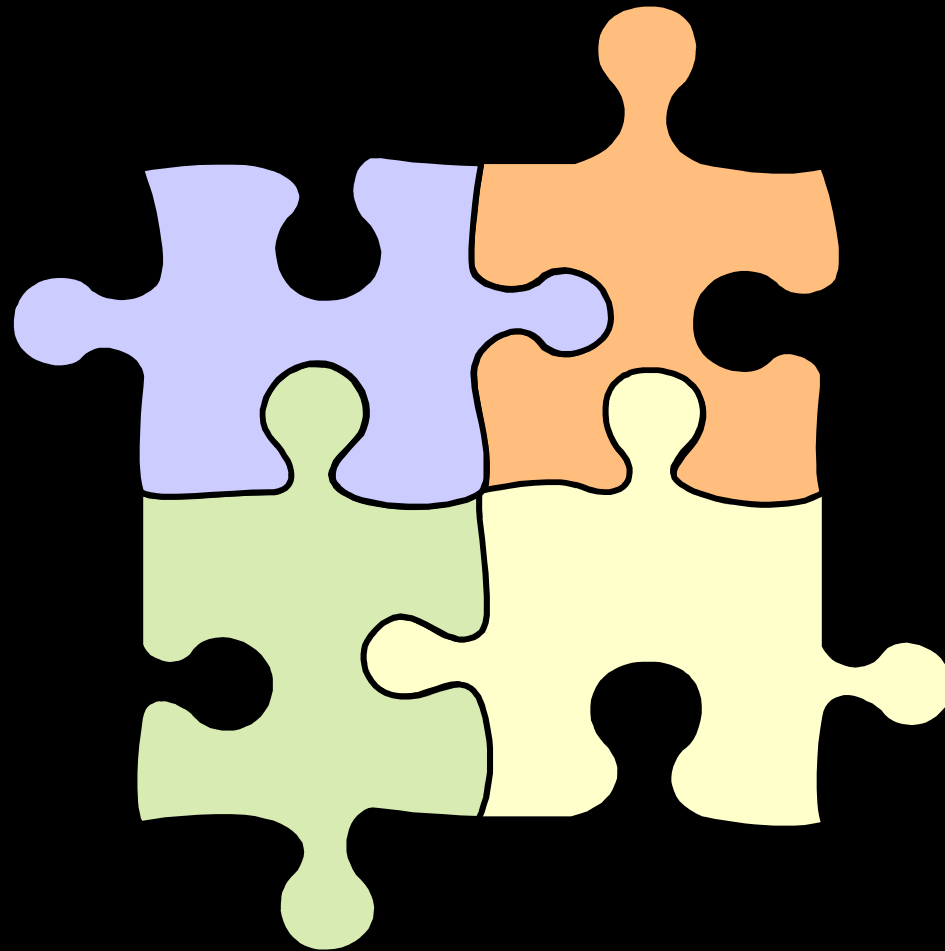




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grazie per l'attenzione!



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