



Mucositis oral en el paciente oncológico

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1.- Introducción

- Mucositis: reacción inflamatoria que afecta a las células epiteliales de la mucosa gastrointestinal.
- Agentes quimioterápicos y radioterápicos actúan en fase proliferativa.
- Importante relevancia clínica

Localizacion más frecuentes	Lesiones ulcerativas
Zona lingual ventral y lateral	19%
Cara interna de la mejilla	16%
Suelo de la boca	10%
Paladar blando	6.9%
Zona interna labio	7% (inferior) 5% (superior)



2.- Etiología

AGENTES QUIMIOTERÁPICOS

- Mas específicos del ciclo celular: bleomicina, fluorouracilo y metotrexato.
- Citarabina
- Doxorubicina (antraciclinas)
- Etopósido a dosis altas
- FU en bolos
- Metotrexato

TERAPIA MOLECULAR

- 30-40% inhibidores de la TK (sorafenib, lenvatinib, regorafenib) destruyen a los receptores del factor de crecimiento endotelial.
- 25% inhibidor de quinasas dependientes de ciclina (palbociclib)
- 10-46 % anti-EGFR (cetuximab, erlotinib)
- 73% inhibidores mTOR (everolimus)

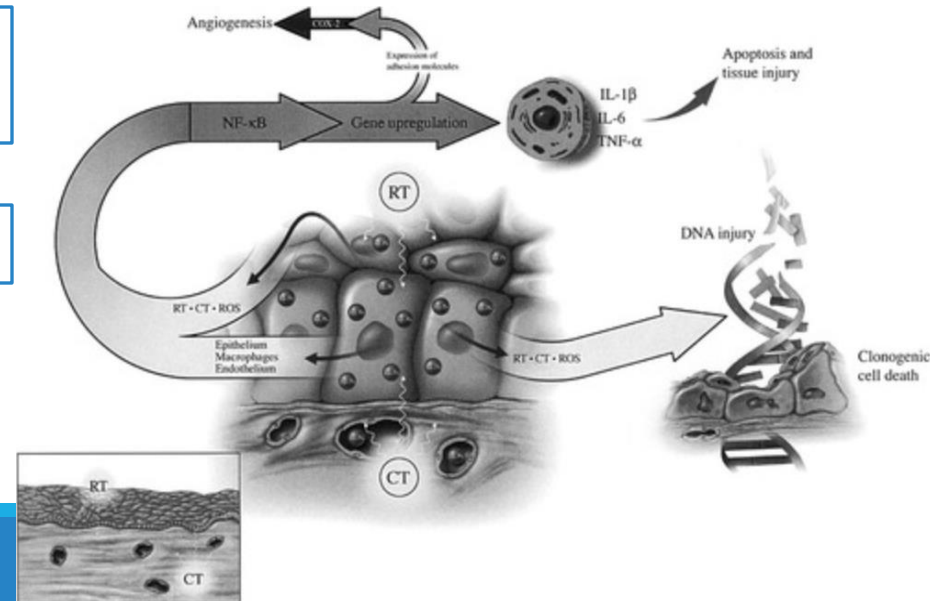
OTRAS CAUSAS

- Enfermedad periodontal
- Pacientes jóvenes: mayor tasa mitótica.
- Estado nutricional.
- Neutropenia.
- Uso de factor de crecimiento hematopoyético
- Predisposición genética

RIESGO DE RECURRENCIA 70%

3.- Fisiopatología

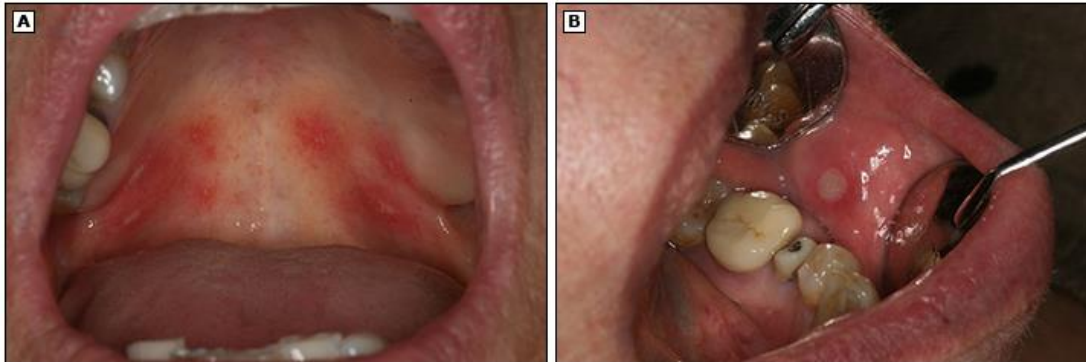
- ➔ **FASE DE INICIACIÓN:** daño mediante especies reactivas de oxígeno.
- ➔ **AUMENTO DE LA EXPRESIÓN Y GENERACIÓN DE SEÑALES MENSAJERAS:**
Activan el factor de transcripción Kappa Beta --> citocinas proinflamatorias.
- ➔ **SEÑALIZACIÓN Y AMPLIFICACIÓN:** precede a la mucositis clínica.
Acumulación de citocinas proinflamatorias --> daño a los tejidos
- ➔ **ULCERACIÓN E INFLAMACIÓN:** pérdida de la integridad de la mucosa.
- ➔ **CURACIÓN**



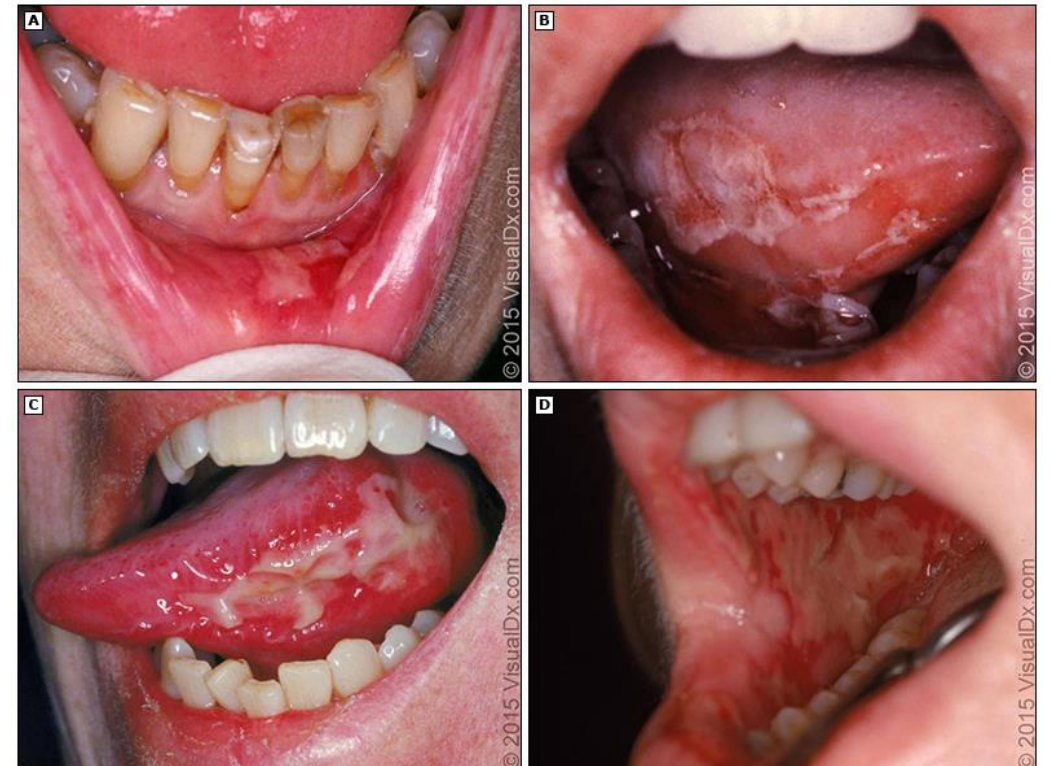
4.- Manifestaciones clínicas

- Enrojecimiento
- Dolor
- Úlceras
- Dificultad para comer
- Dificultad para tragar
- Dificultad para hablar

Mucositis causada por terapia molecular dirigida



Mucositis causada por agentes quimioterápicos



5.- Clasificación según gravedad

CTCAE <i>National Cancer Institute Common Terminology Criteria for Adverse Events</i>	
Grado 1	Asintomático/molestias leves. No interfiere con la alimentación.
Grado 2	Dolor moderado o úlceras que no interfieren con la ingesta. Modificar dieta.
Grado 3	Dolor intenso que interfiere con la ingesta. Solo puede ingerir líquidos.
Grado 4	No puede alimentarse. Intervención urgente.
Grado 5	Muerte.

} Valorar NE



5.- Clasificación según gravedad

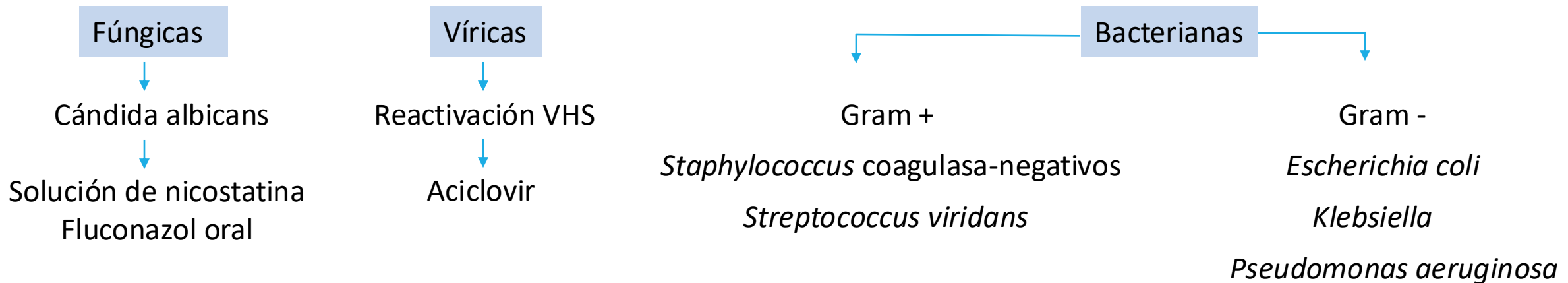
OMS	
Grado 0	Sin evidencias subjetivas ni objetivas de la enfermedad.
Grado 1	Dolor oral con o sin eritema, sin úlceras.
Grado 2	Eritema y ulceración. Puede tragar sólidos.
Grado 3	Eritema y ulceración. No puede tragar sólidos. Dieta líquida.
Grado 4	Úlceras que imposibilitan la alimentación



6.- Complicaciones



- Impacto en la terapia oncológica: toxicidad limitante de dosis.
- Deterioro nutricional: mucositis grado 3, 4 valorar nutrición enteral (integriado del tracto digestivo)
- Sobreinfecciones



7.- Manejo de la mucositis. Guías MASCC/ISOO

Multinational Association for Supportive Care in Cancer/International Society of Oral Oncology



Cuidado oral:

BOC

- III • The panel suggests that implementation of *multiagent combination* oral care protocols is beneficial for the prevention of OM during CT.
- III • The panel suggests that implementation of *multiagent combination* oral care protocols is beneficial for the prevention of OM during H&N RT.
- III • The panel suggests that implementation of *multiagent combination* oral care protocols is beneficial for the prevention of OM during HSCT.
- III • No guideline was possible regarding the use of *professional oral care* for the prevention of OM in patients with hematologic, solid, or H&N cancers because of limited and inconsistent data.

An expert opinion complements this guideline: Although there was insufficient evidence to support the use of professional oral care for OM prevention, the panel is of the opinion that dental evaluation and treatment as indicated before cancer therapy are desirable to reduce risk for local and systemic infections from odontogenic sources.

- III • No guideline was possible regarding the use of *patient education* for the prevention of OM in patients with hematologic cancer during HSCT or CT because of limited and inconsistent data.

An expert opinion complements this guideline: The panel is of the opinion that educating patients about the benefits of BOC strategies is still appropriate because this may improve self-management and adherence to the recommended oral care protocol during cancer treatment.

- III • No guideline was possible regarding the use of *saline or sodium bicarbonate* rinses in the prevention or treatment of OM in patients undergoing cancer therapy because of limited data.



An expert opinion complements this guideline: Despite the limited data available for both saline and sodium bicarbonate, the panel recognizes that these are inert, bland rinses that increase oral clearance, which may be helpful for maintaining oral hygiene and improving patient comfort.



- III • The panel suggests that CHX not be used in the prevention of OM in patients undergoing H&N RT.



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Antiinflamatorios:

Anti-inflammatory agents

I

- The panel recommends *benzydamine* mouthwash for the prevention of OM in patients with H&N cancer receiving a moderate dose RT (<50 Gy).

II

- The panel suggests the use of *benzydamine* mouthwash for the prevention of OM in patients with H&N cancer who receive RT-CT.



Fotobiomodulación:

PBM



I

- The panel recommends the use of intraoral *PBM* therapy using low-level laser therapy for the prevention of OM in adult patients receiving HSCT conditioned with high-dose CT, with or without TBI, using one of the selected protocols listed in Table 2.

II

- The panel recommends the use of intraoral *PBM* therapy using low-level laser therapy for prevention of OM in adults receiving RT to the H&N (without CT) (Table 2); safety considerations unique to patients with oral cancer should be considered.

I

- The panel recommends the use of intraoral *PBM* therapy using low-level laser therapy for the prevention of OM in adults receiving RT-CT for H&N cancer (Table 2); safety considerations unique to patients with oral cancer should be considered.
- For all PBM guidelines, it is recommended that the specific PTPs of the selected protocol will be followed for optimal therapy.

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Crioterapia:

Cryotherapy

- II • The panel recommends using oral *cryotherapy* to prevent OM in patients undergoing autologous HSCT when the conditioning includes high-dose **melphalan**.
- II • The panel recommends using 30 min of oral *cryotherapy* to prevent OM in patients receiving **bolus 5-FU CT** during the infusion of the CT.



Antimicrobianos, agentes de recubrimiento, anestésicos y analgésicos

Antimicrobials, coating agents, anesthetics, and analgesics



- III • Topical *morphine* 0.2% mouthwash is suggested for the treatment of OM-associated pain in patients with H&N cancer who receive RT-CT.
- II • *Sucralfate* (combined topical and systemic) is **not** recommended for the prevention of OM-associated pain in patients with H&N cancer who receive RT.
- II • *Sucralfate* (combined topical and systemic) is **not** recommended for the treatment of OM-associated pain in patients with H&N cancer who receive RT.
- II • *Sucralfate* (combined topical and systemic) is **not** recommended for the treatment of OM-associated pain in patients with solid cancer who receive CT.

Premios anti-Nobel



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Factores de crecimiento:



Growth factors and cytokines

I



II

- The use of *KGF-1* intravenously is recommended for the prevention of OM in patients with hematologic cancer undergoing autologous HSCT with a conditioning regimen that includes high-dose CT and TBI.
- The evidence suggests that topical GM-CSF should not be used for the prevention of OM in patients undergoing HSCT.



Agentes naturales y miscelánea:

Natural and miscellaneous

I

II

II

III

- The panel recommends against the use of *glutamine* (parenteral) for the prevention of OM in patients undergoing HSCT.
- The panel suggests oral *glutamine* for the prevention of OM in patients with H&N cancer who receive receiving RT-CT.
The suggestion is with caution because of the higher mortality rate seen in patients undergoing HSCT who receive parenteral glutamine.
- *Honey* is suggested for the prevention of OM in patients with H&N cancer who receive treatment with either RT or RT-CT.
- *Chewing gum* is not suggested for the prevention of OM in pediatric patients with hematological or solid cancer who receive CT.

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Resumen de las intervenciones que han demostrado evidencia científica

Intervención	Contexto clínico	Nivel de evidencia	Grado de recomendación
Crioterapia oral	QT con 5-FU en bolos	II	Recomendación a favor
	Melfalán como acondicionamiento en trasplante autólogo	III	Sugerencia a favor
Palifermina (KGF 1)	Trasplante autólogo y acondicionamiento con QT y radiación corporal total	II	Recomendación a favor
Fotobiomodulación	Trasplante de cél. madre con QT con/sin radiación corporal total.	I	Recomendación a favor
	Tumores CYC con QT y RT	I	Recomendación a favor

8.- Conclusiones

- Manejo del dolor { Casos severos (3 y 4) requieren opiodes sistémicos para el control del dolor.
Anestésicos locales: alivio a nivel local. Las guías sugieren precaución con estos agentes.
- Infecciones concomitantes { Cuidado de las úlceras: fórmulas magistrales protectoras.
Manejo específico de las infecciones secundarias.
- Soporte nutricional { Mucositis grado 3-4 evaluación inmediata del estado nutricional.
Valorar nutrición enteral para prevenir la desnutrición y el deterioro clínico.



9.- Bibliografía

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MUCHAS GRACIAS

POR VUESTRA ATENCIÓN

