

# Gaixotasun gingibalak

**Egileak:** Aguirre-Zorzano LA, Estefanía-Fresco R, Fernández-Jiménez A, García-De-La-Fuente AM



<p>Osasun periodontala eta gaixotasun gingibalak</p> <p>Osasun gingibal eta periodontala</p> <p><i>Biofilm</i>-arekin lotutako gingibitisa</p> <p><i>Biofilm</i>-arekin ez lotutako gaixotasun gingibalak</p>	<p><b>Periodontitisa</b></p> <p>Gaixotasun periodontal nekrosiarrak</p> <p>Periodontitisa</p> <p>Periodontitisa, gaixotasun sistemiko baten manifestazio bezala</p>	<p><b>Periodontoari erasaten dioten beste egoerak</b></p> <p>Txertatzeko ehun periodontalei erasaten dieten gaixotasun edo egoera sistemikoak</p> <p>Abzesu periodontalak eta lesio endoperiodontalak</p> <p>Lesio mukogingibalak</p> <p>Indar oklusal traumatikoak</p> <p>Protesi eta hortzarekin lotutako faktoreak</p>	<p><b>Gaixotasun periinplantarioak</b></p> <p>Osasun periinplantarioa</p> <p>Mukositis periinplantarioa</p> <p>Periinplantitisa</p> <p>Ehun periinplantario bigun eta gogorren gabeziak</p>
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2. taula. Gaixotasun periodontal eta periinplantarioen sailkapen berria (AAP & EFP 2018)

Caton et al. 2018



Hanturazko gaixotasun periodontala



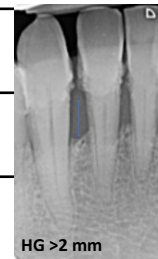
**Pazienteak adierazitakoa / Ebaluazio klinikoa:**  
Hortzoi-hanturaren seinale eta zantzuak

# Gaixotasun gingibalak: Gingibitisa

Zantzuak	Hortzoi (osasuntsua)	Gingibitis guztiak
Kolorea	Arrosa korala (melanosi gingibala)	Gorrixka/urdin-morea (ubeldura)
Tamaina	Poltsarik ez	Pseudopoltsak (hortzoiaren-handitzeak)
Ingurua	Oxkarduna	Oxkardun-patroia galtzen da
Trinkotasuna	Sendoa	Biguna / edemazkoa
Odol-jarioa (zundaketa)	<b>Ez</b>	<b>Bai</b>



Aguirre-Zorzano <i>et al.</i> , 2016	<b>Gingibitisa</b>	<b>Periodontitisa</b>
<b>Etiologia</b>	Bakterianoa	
<b>Epidemiologia</b>	Adin guztiengan	
<b>Lesioen kokapena</b>	Hortzoian bakarrik	Periodonto osoan
<b>Klinika</b>	Hantura, odol-jarioa, zantzu erradiografikorik gabe	Zundaketa-sakonera handitua/hortzoiaren atzera-egiteak, intsertzio-galera, odol-jarioa, zorne-jarioa, furkazio-lesioak, hortz-mugikortasuna
<b>Iraupena</b>	Itzulgarria (aho-higiene aproposa)	Iraunkorra
<b>Intsertzio-galera</b>	Ez	Bai
<b>Hezur-galera (HG) erradiografikoa</b>	Ez	Bai



# Gingibitisa: sailkapenak

AAP, 1999

- I. Gingival Diseases
  - A. Dental plaque-induced gingival diseases\*
    1. Gingivitis associated with dental plaque only
      - a. without other local contributing factors
      - b. with local contributing factors (See VIII A)
    2. Gingival diseases modified by systemic factors
      - a. associated with the endocrine system
        - 1) puberty-associated gingivitis
        - 2) menstrual cycle-associated gingivitis
        - 3) pregnancy-associated
          - a) gingivitis
          - b) pyogenic granuloma
        - 4) diabetes mellitus-associated gingivitis
      - b. associated with blood dyscrasias
        - 1) leukemia-associated gingivitis
        - 2) other
    3. Gingival diseases modified by medications
      - a. drug-influenced gingival diseases
        - 1) drug-influenced gingival enlargements
        - 2) drug-influenced gingivitis
          - a) oral contraceptive-associated gingivitis
          - b) other
      4. Gingival diseases modified by malnutrition
        - a. ascorbic acid-deficiency gingivitis
        - b. other
    - B. Non-plaque-induced gingival lesions
      1. Gingival diseases of specific bacterial origin
        - a. *Neisseria gonorrhoea*-associated lesions
        - b. *Treponema pallidum*-associated lesions
        - c. streptococcal species-associated lesions
        - d. other
      2. Gingival diseases of viral origin
        - a. herpesvirus infections
          - 1) primary herpetic gingivostomatitis
          - 2) recurrent oral herpes
          - 3) varicella-zoster infections
        - b. other
    3. Gingival diseases of fungal origin
      - a. *Candida*-species infections
        - 1) generalized gingival candidosis
        - b. linear gingival erythema
        - c. histoplasmosis
        - d. other
      4. Gingival lesions of genetic origin
        - a. hereditary gingival fibromatosis
        - b. other
      5. Gingival manifestations of systemic conditions
        - a. mucocutaneous disorders
          - 1) lichen planus
          - 2) pemphigoid
          - 3) pemphigus vulgaris
          - 4) erythema multiforme
          - 5) lupus erythematosus
          - 6) drug-induced
          - 7) other
        - b. allergic reactions
          - 1) dental restorative materials
            - a) mercury
            - b) nickel
            - c) acrylic
            - d) other
          - 2) reactions attributable to
            - a) toothpastes/dentifrices
            - b) mouthrinses/mouthwashes
            - c) chewing gum additives
            - d) foods and additives
          - 3) other
        6. Traumatic lesions (factitious, iatrogenic, accidental)
          - a. chemical injury
          - b. physical injury
          - c. thermal injury
        7. Foreign body reactions
        8. Not otherwise specified (NOS)

Figure 1.

Classification of periodontal diseases and conditions.

\* Can occur on a periodontium with no attachment loss or on a periodontium with attachment loss that is not progressing.

AAP & EFP, 2018

2. **Gingivitis – dental plaque-induced: intact periodontium; reduced periodontium in non-periodontitis patient; reduce periodontium in successfully treated periodontitis patient.\***
  - A. Associated with biofilm alone
  - B. Mediated by systemic or local risk factors
    - i. Systemic risk factors (modifying factors)
      - (a) Smoking
      - (b) Hyperglycemia
      - (c) Nutritional factors
      - (d) Pharmacological agents (prescription, non-prescription and recreational)
      - (e) Sex steroid hormones
        - Puberty
        - Menstrual cycle
        - Pregnancy
        - Oral contraceptives
      - (f) Hematological conditions
    - ii. Local risk factors (predisposing factors)
      - (a) Dental plaque biofilm retention factors (e.g., prominent restoration margins)
      - (b) Oral dryness
  - C. Drug-influenced gingival enlargement
3. **Gingival diseases – non-dental plaque-induced<sup>26</sup>**
  - A. Genetic/developmental disorders
    - i. Hereditary gingival fibromatosis\*
  - B. Specific infections
    - i. Bacterial origin
      - (a) *Neisseria gonorrhoeae*\*
      - (b) *Treponema pallidum*\*
      - (c) *Mycobacterium tuberculosis*\*
      - (d) Streptococcal gingivitis
    - ii. Viral origin
      - (a) Coxsackie virus (hand-foot-and-mouth disease)\*
      - (b) Herpes simplex I & II (primary or recurrent)\*
      - (c) Varicella zoster (chicken pox & shingles – V nerve)\*
      - (d) Molluscum contagiosum\*
      - (e) Human papilloma virus (squamous cell papilloma; condyloma acuminatum; verruca vulgaris; focal epithelial hyperplasia)
    - iii. Fungal origin
      - (a) Candidosis
      - (b) Other mycoses, e.g., histoplasmosis, aspergillosis
  - C. Inflammatory and immune conditions
    - i. Hypersensitivity reactions
      - (a) Contact allergy\*
      - (b) Plasma cell gingivitis\*
      - (c) Erythema multiforme\*
    - ii. Autoimmune diseases of skin and mucous membranes
      - (a) Pemphigus vulgaris\*
      - (b) Pemphigoid\*
      - (c) Lichen planus\*
      - (d) Lupus erythematosus\*
        - Systemic lupus erythematosus
        - Discoid lupus erythematosus
    - iii. Granulomatous inflammatory lesions (orofacial granulomatoses)
      - (a) Crohn's disease\*
      - (b) Sarcoidosis\*
  - D. Reactive processes
    - i. Epulides
      - (a) Fibrous epulis
      - (b) Calcifying fibroblastic granuloma
      - (c) Vascular epulis (pyogenic granuloma)
      - (d) Peripheral giant cell granuloma\*
    - ii. Premalignancy
      - (a) Leukoplakia
      - (b) Erythroplakia
    - iii. Malignancy
      - (a) Squamous cell carcinoma\*
      - (b) Leukemic cell infiltration\*
      - (c) Lymphoma\*
        - Hodgkin
        - Non-Hodgkin
  - E. Endocrine, nutritional & metabolic diseases
    - i. Vitamin deficiencies\*
      - (a) Vitamin C deficiency (scurvy)
  - F. Traumatic lesions
    - i. Physical/mechanical trauma
      - (a) Frictional keratosis
      - (b) Mechanically induced gingival ulceration
      - (c) Facititious injury (self-harm)
    - ii. Chemical (toxic) burn
      - (a) Thermal insults
      - (b) Burns to gingiva
  - G. Gingival pigmentation
    - i. Melanoplakia\*
    - ii. Smoker's melanosis
    - iii. Drug-induced pigmentation (antimalarials, minocycline)
    - iv. Amalgam tattoo

<sup>26</sup>Conditions marked with an "a" have associated systemic involvement or are oral manifestations of systemic conditions; therefore, other health-care providers may be involved in diagnosis and treatment.

<https://aap.onlinelibrary.wiley.com/doi/epdf/10.1902/annals.1999.4.1.1>



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AAP & EFP, 2018

## A. Bakterio-plakak ("biofilm") eragindako gingibitisa:

1. *Periodonto osoa*

2. *Periodonto murriztua:*

a) *Paziente EZ periodontal*

b) *Paziente periodontal EGONKORRA*

## B. Bakterio-plakak ("biofilm") ez eragindako gingibitisa

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1. *Periodonto osoa*

2. *Periodonto murriztua:*

a) *Paziente EZ periodontal*

b) *Paziente periodontal EGONKORRA:*

● *Periodontitisaren berrerritza*

● *Periodonto murriztuaren gingibitisa*

## B. Bakterio-plakak ("biofilm") ez eragindako gingibitisa

\*Conditions marked with an "a" have associated systemic involvement or are oral manifestations of systemic conditions; therefore, other health-care providers may be involved in diagnosis and treatment.

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# A. Bakterio-plakak ("biofilm") eragindako gingibitisa

	Osasuna			Gingibitisa		
	Periodont o osoa	Periodonto murriztua		Periodonto osoa	Periodonto murriztua	
		Paziente ez periodontala	Paziente periodontal egonkorra		Paziente ez periodontala	Paziente periodontal egonkorra
<i>Chapple et al., 2018;</i> <i>Trombelli et al., 2018</i>						
<b>Intsertzio-galera (zundatzerakoan)</b>	Ez	Bai		Ez	Bai	
<b>Zundaketa-sakonera (onartuz pseudopoltsik ez)</b>	≤ 3 mm	≤ 3 mm (leku gutziek)	≤ 4 mm (lekurik ez ≥ 4 mm OJ-I-rekin) / (leku gutziek)	≤ 3 mm	≤ 3 mm (leku gutziek)	
<b>Odol-jarioa indizea (Oj-I) (odoltzea zundatzerakoan)</b>	< % 10			Bai (≥ % 10); Mugatua ≤ % 30 eta Orokortua > % 30		
<b>Hezur-galera (HZ) erradiografikoa</b>	Ez	Posible	Bai	Ez	Posible	Bai

# A. Bakterio-plakak ("biofilm") eragindako gingibitisa

## A. "Biofilm"-arekin bakarrik erlazionatua

## B. Faktore lokal edo sistemikoek eraginda:

### i. Arrisku faktore sistemikoak (faktore aldatzaileak):

(a) Tabakoa

(b) Hipergluzemia

(c) Faktore nutrizionalak

berriak

(d) Agente farmakologikoak (preskribatua, ez-preskribatua eta errecreatiboak)

(e) Sexu hormona esteroideak:

(f) Pubertaroa

(g) Ziklo menstrualak

(h) Haurdunaldia

(i) Antisorgailuak

(j) Kondizio hematologikoak

### ii. Arrisku faktore lokalak (faktore hartaratzailak):

(a) Bakterio-plaka pilatzeari eragiten dioten faktoreak

posizio berria



Aguirre-Zorzano et al., 2016

Egileen irudia

## C. Drogek eragindako hortzoiaren handitzeak

Murakami et al., 2018



# A. Bakterio-plakak ("biofilm") eragindako gingibitisa: arrisku faktoreak (larritasuna eta gradua)

Lokalak (hartaratzailleak)	Sistemikoak (aldatzaileak) "hiper" - hantura
<p>1. Bakterio-plaka pilatzeari eragiten dioten faktoreak</p> <ul style="list-style-type: none"> <li>Anatomikoak (esmalte-perlak)</li> <li>Iatrogenikoak (errestaurazioak, azpigingibaleko ertz edo marjinak...)</li> </ul> <p style="text-align: right;"><i>Lang et al., 1983, Schätzle et al., 2001</i></p>	<p>1. Tabakoa</p> <p>2. Faktore metabolikoak (pazientearen hipergluzemia: diabetikoak ala ez)</p>
<p>2. Aho-lehortasuna</p> <ul style="list-style-type: none"> <li>Ezpainen batzearen ezintasuna</li> <li>Xerostomia</li> </ul> <p style="text-align: right;"><i>Mizutani et al., 2015</i></p>	<p>1. Nutrizio-gabeziak (C bitamina)</p> <p>2. Farmakoak</p> <p>3. Hormona esteroideak gehitzea (pubertaro, haurdunaldia, menopausia, antisorgailuak)</p> <p>4. Hematologikoak</p>

## B. Bakterio-plakak ("biofilm") ez eragindako gingibitisa

### A. Desordena genetikoa/garapenekoak:

- i. Fibromatosi gingibal hereditarioa

### B. Infekzio espezifikoak:

- i. Jatorri bakterianoa:

(a) *Neisseria gonorrhoeae*

(b) *Treponema pallidum*

berriak

(c) *Mycobacterium tuberculosis*

(d) Gingibitis streptococcal-a

- ii. Jatorri birikoa:

(a) Cocksackie birusa (esku-hanka-aho gaixotasuna)

(b) Herpes sinplea I & II (primarioa edo atzerakaria)

(c) Barizela-zoster (barizela & herpes - V. nerbioa)

(d) Molusku kutsakorra

(e) Gizatiar papiloma birusa (zelula ezkatadun papiloma; *condyloma acuminatum*; garatxo arrunta; hiperplasia fokal epiteliala)

- iii. Jatorri fungikoa:

(a) Kandidosia

Hortzoi-eritema lineala desagertzen da

(b) Beste mikosiak (adb. histoplasmosia, aspergilosia)



## B. Bakterio-plakak ("biofilm") ez eragindako gingibitisa

### C. Kondizio immuneak eta hanturazkoak:

#### i. Hipersentiberatasun erreakzioa:

(a) Kontaktuzko alergia

berriak

(b) Plasma zelula gingibitisa

**Etiologia:** Kanelari alergia (txiklean dago)

(c) Eritema multiformea

#### ii. Azalaren eta mintz mukosoen gaixotasun autoimmuneak:

(a) Penfigo arrunta

(b) Penfigoidea

(c) Liken laua

(d) Lupus eritematosoa (sistemikoa / diskoidea)

#### iii. Hanturazko lesio pikortsuak (aurpegiko pikortasunak):

(a) Crohn gaixotasuna

(b) Sarkoidosia

berriak

### D. Prozesu errektiboak:

- i. Epuloideak:
  - (a) Epulis fibrosoa
  - (b) Granuloma fibroblastiko kaltzifikantea
  - (c) Epulis baskularra (granuloma piogenikoa)
  - (d) Zelula erraldoi periferikoen granuloma

### E. Neoplasiak:

- i. Pre-gaiztoa:
  - (a) Leukoplasia
  - (b) Eritroplasia
- ii. Gaiztoa:
  - (a) Zelula ezkatadunen kartzinoma
  - (b) Zelula leuzemikoen infiltrazioa
  - (c) Linfoma (Hodgkin / Ez-Hodgkin)

## B. Bakterio-plakak ("biofilm") ez eragindako gingibitisa

### F. Gaixotasun endokrino, nutrizional & metabolikoak:

- i. Bitamina gabeziak:
  - (a) Bitamina C gabezia (eskorbutoa)

### G. Lesio traumatikoak:

- i. Trauma fisiko / mekanikoak: berriak
  - (a) Keratosi frikzionala
  - (b) Mekanikoki eragindako ultzera gingibala
  - (c) Lesio artifiziala (norbanako-kalte)
- ii. Erredura kimikoa (toxikoa)
- iii. Min termikoa:
  - (a) Hortzoiaren erredura

### H. Hortzoiaren pigmentazioa:

- i. Melanoplakia
- ii. Erretzaileen melanosia
- iii. Drogek eragindako pigmentazioa (antimalarikoak, minoziklina)
- iv. Amalgama tatuajea

# *Eta zer egingo dugu, paziente berria etortzen denean???*

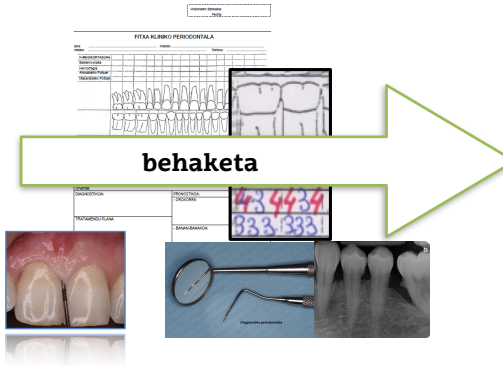


Anamnesia

Ahoaren miaketa

Periodontograma

Hegal-ausikiaren erradiografiak



Periodonto osasuntsua

Gingibitisa

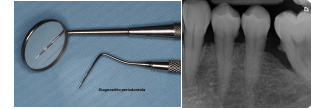


Periodontitisa



# Diagnostikoa egiteko funtsezko urratsak

1. Zehaztu pazientea osasunean dagoen ala, alderantziz, gingibitisa edo periodontitisa izateko susmagarria den
2. Zehaztu gingibitisaren kasua izateko irizpideak betetzen dituen
3. Zehaztu periodontitisaren kasua izateko irizpideak betetzen dituen
4. Zehaztu eta ezberdindu periodontitisaren faseak
5. Zehaztu eta ezberdindu periodontitisaren graduak
6. Zehaztu pazienteak bestelako gaixotasun periodontala edo/ eta periinplantarioa duen



# Diagnostikoa egiteko funtsezko urratsak

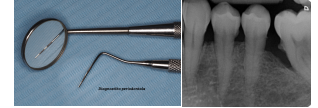
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Zeinu eta seinale klinikoak

Erradiografia periapikalak

Periodontograma



# Diagnostikoa egiteko funtsezko urratsak

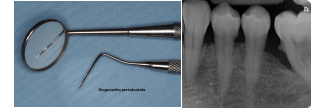
1. Zehaztu pazientea osasunean dagoen ala, alderantziz, gingibitisa edo periodontitisa izateko susmagarria den
2. Zehaztu gingibitisaren kasua izateko irizpideak betetzen dituen:

Odol-jario indizea

Hezur-galera erradiografikorik

Gingibitis mugatua (OJ-I  $\leq$  % 30)

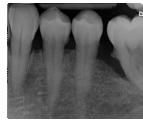
Gingibitis orokortua (OJ-I  $>$  % 30)



# 1. urrats gakoa



paziente berria



(+)

Erradiografiaren kalitatea?  
Segida erradiografikoa?

(+)

Hezur-galera  
erradiografikorik?

(-)

(-)

(+)

(-)



Hortz-arteko  
intertzio-galera?

(+)

(-)

Masail-aldeko hortzoiaren  
atzera-egitea  
+  
Zundaketa-sakonera >3 mm

(+)

**BAI (+)**



**periodontitisaren  
susmoa**

(+)

**Kasua  
Fasea  
Gradua**



(-)



**osasuna**  
Egileen irudiak

<% 10-a

% Odol-jarioa indizea

≥% 10-a



**gingibitisa**



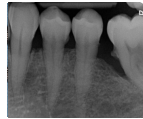
Tonetti & Sanz, 2019



# 1. urrats gakoa



paziente berria



(+)

Erradiografiaren kalitatea?  
Segida erradiografikoa?

(+)

Hezur-galera  
erradiografikorik?

(+)

(-)

(-)

(-)



Hortz-arteko  
intertzio-galera?

(+)

(-)

Masail-aldeko hortzoiaren  
atzera-egitea  
+  
Zundaketa-sakonera >3 mm

(+)

BAI (+)



Periodontitisaren  
susmoa

(+)

Kasua  
Fasea  
Gradua



## Gingibitisa



(-)



osasuna  
Egileen irudiak

<% 10-a

% Odol-jarioa indizea

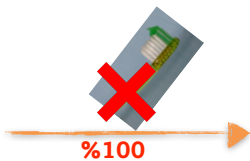
≥% 10-a

Tonetti & Sanz, 2019





Periodonto osasuntsua



Gingibitisa



Periodontitisa



*itzulgarria*



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