



UNIVERSIDAD  
**COMPLUTENSE**  
MADRID

Proyecto de Innovación y Mejora de la Calidad Docente

Convocatoria 2015

Nº de proyecto: **176**

**Desarrollo y Evaluación de un nuevo modelo de enseñanza bilingüe en  
Periodoncia**

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Departamento Estomatología III

## 1. **Objetivos propuestos en la presentación del proyecto**

- **Objetivo 1.** Desarrollo informático del entorno interactivo en inglés.
- **Objetivo 2.** Para la evaluación del contenido de este entorno interactivo, se realizará el diseño de una exploración evaluadora más acorde con los objetivos actuales del Espacio Europeo de Educación Superior, es decir una evaluación basada en competencias (ECOЕ).
- **Objetivo 3.** Implementación del examen clínico objetivo y estructurado (ECOЕ) a los alumnos de Odontología.
- **Objetivo 4.** Evaluación del impacto de este entorno virtual sobre el aprendizaje de los estudiantes de Grado

## **2. Objetivos alcanzados (Máximo 2 folios)**

### **Objetivo 1.**

Debido a la falta de financiación del proyecto, no se ha podido contratar a personal informático externo para la maquetación del material. Para intentar subsanar este inconveniente, se adaptaré ese material al entorno moodle 2.6 en el campus virtual de la asignatura.

### **Objetivo 2.**

Se ha realizado el diseño de los ECOE inicial y final.

### **Objetivo 3.**

Teniendo en cuenta que el listado definitivo con la resolución definitiva de los proyectos de Innovación de esta convocatoria se recibió el 16 de julio de 2015 y que la asignatura de Periodoncia I, en la que se va a aplicar el proyecto, es semestral y comienza el año que viene, nos ha sido imposible implementarlo en este periodo de tiempo.

### **Objetivo 4.**

Se ha realizado el diseño de la encuesta de evaluación para analizar el impacto de este entorno sobre el aprendizaje, pero debido a las limitaciones planteadas en el objetivo anterior, está pendiente su realización a los alumnos.

### **3. Metodología empleada en el proyecto (Máximo 1 folio)**

Para desarrollar cada uno de los objetivos se utilizaron diferentes herramientas:

#### **Objetivo 1**

Los profesores integrantes del equipo, se han encargado de la traducción al inglés del proyecto de innovación 49/2014. Posteriormente se ha modificado el material del proyecto para su adaptación al campus virtual en un entorno moodle 2.6.

#### **Objetivo 2, 3**

Se han diseñado dos ECOE: ECOE INICIAL con un carácter formativo y un ECOE FINAL con carácter sumativo.

Los exámenes comprenden 6 sesiones evaluativas o estaciones, basadas en las competencias que se obtuvieron en la encuesta realizada a alumnos y profesores en el proyecto 49/2014, y que eran las que se consideraron que eran necesario reforzar en los estudiantes; y en los casos clínicos reales:

Diagnóstico radiográfico

Diagnóstico avanzado.

Enfermedades periimplantarias

Halitosis

Raspado y alisado radicular

Casos clínicos reales

- Estación 1. Para ser competente en decidir acerca de la necesidad de un diagnóstico radiológico, tomando radiografías de relevancia o evaluando las imágenes en relación a los hallazgos periodontales o periimplantarios relevantes o evaluando el hueso disponible para el tratamiento con implantes.
- Estación 2. Debe tener conocimiento de otras técnicas de diagnóstico avanzado adecuadas, como diagnóstico microbiológico, genético y bioquímico relevantes para el estudio de la condición periodontal o periimplantarias, además de comprender su fiabilidad diagnóstica y validez.
- Estación 3. Para ser competente en el tratamiento de la mucositis periimplantaria y tener conocimiento de los enfoques terapéuticos para el tratamiento de las enfermedades periimplantarias.
- Estación 4. Para tener conocimiento de los enfoques de diagnóstico y tratamiento empleados en el manejo de pacientes con halitosis oral.
- Estación 5. Para ser competente en la realización del raspado y alisado radicular, usando instrumentación mecánica y manual, e incluyendo la eliminación de manchas y pulido.
- Estación 6. Ser competente en tomar decisiones que permitan establecer una actitud diagnóstica y un plan de tratamiento integral periodontal/periimplantario de

complejidad limitada en pacientes de todas las edades y condiciones, planificando su secuencia y priorizando las diferentes alternativas terapéuticas.

**Objetivo 4** Se diseñó una encuesta para analizar los posibles beneficios o dificultades que pueden encontrar con la aplicación de este entorno virtual en la enseñanza.

#### **4. Recursos humanos** (Máximo 1 folio)

Para el desarrollo del proyecto es imprescindible la colaboración de los profesores adscritos al grupo:

**Bettina María Alonso Álvarez y Margarita Iniesta Albentosa** encargadas del diseño del proyecto, planificación de los contenidos pedagógicos y coordinación de las diferentes etapas del proyecto.

**Mariano Sanz Alonso y David Herrera González** responsables del asesoramiento y supervisión del proyecto.

**Lorenzo de Arriba de la Fuente** encargado del tema Diagnóstico radiográfico y Diagnóstico avanzado.

**Elena Figuero Ruiz** responsable del tema Enfermedades periimplantarias y Halitosis.

**Berta Legido Arce** encargada del tema Raspado y alisado radicular.

**Isabel Santa Cruz Astorqui** encargada de los Casos clínicos reales.

Debido a las limitaciones económicas, no se pudo contratar a personal para la maquetación de los temas y su adaptación a entornos virtuales, con lo que se ha adaptado el material al campus virtual.

## **5. Desarrollo de las actividades (Máximo 3 folios)**

### **Primera fase. Preparación del material en inglés.**

Se ha realizado la traducción al inglés del material procedente del proyecto de innovación 49/2014.

Este material se adaptará al entorno moodle 2.6, para poder ser colgado en el campus virtual de la asignatura y permitir a los alumnos el acceso y manejo.

### **Segunda fase. Diseño del curso.**

Se ha realizado el reparto del temario para la elaboración de los seminarios y clases magistrales. También se han distribuido los problemas que se van a desarrollar en la asignatura y que los profesores tienen que organizar adaptados a la enseñanza de "aprendizaje basado en los problemas".

### **Tercera fase. Diseño del ECOE y de la encuesta de valoración del entorno virtual.**

Se ha realizado el diseño de dos exámenes clínicos objetivos y estructurados, el inicial con un carácter formativo y uno final con un carácter sumativo.

También se ha diseñado una encuesta para valorar la experiencia trabajando en el entorno virtual en inglés y poder así analizar los posibles beneficios o dificultades que pueden encontrar con la aplicación de este entorno virtual en inglés en la enseñanza.

Al ser una asignatura del segundo semestre, el **resto de las fases** están pendientes de realizarse, en cuanto de comienzo la asignatura de Periodoncia I.

## 6. Anexos

### Anexo 1.

#### Diagnóstico radiológico

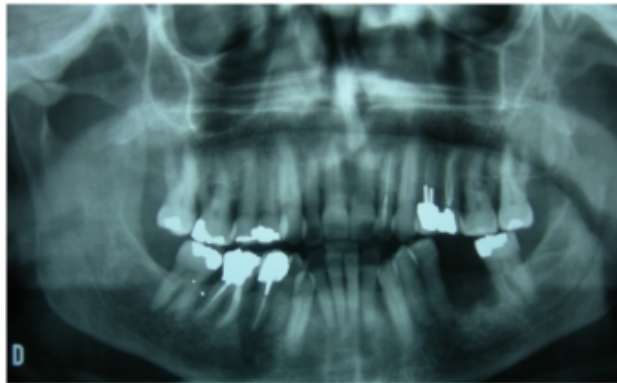
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##### Bibliografía recomendada

- Position paper Diagnosis of Periodontal Disease. *J. Periodontol* 2003; 74:1237-1247.
- . Loos BG, John RP, Laine ML. Identification of genetic risk factors for periodontitis and possible mechanisms of action. Identification of genetic risk factors for periodontitis and possible mechanisms of action. *J Clin Periodontol* 2005; 32 (Suppl. 6): 159–179.
- Sahingur SE and Cohen RE. Analysis of host responses and risk for disease progression. *Periodontol* 2000 2004; 34, 57-83.
- Looemer PM. Microbiological diagnostic testing in the treatment of periodontal diseases. *Periodontol* 2000 2004; 34; 49-56.

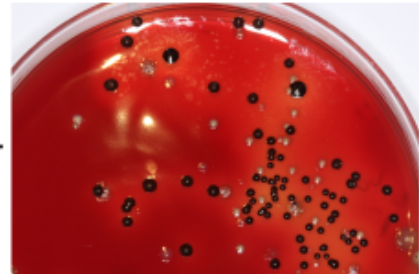
To assess the periodontal involvement, the best technique of X-ray examination will be conducting a panoramic radiograph, because we can see better the bone defects in the anterior region:

- True.
- False.



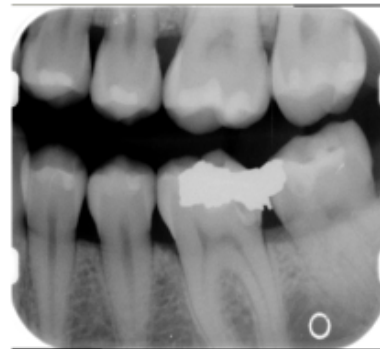
One of the main advantages of culture methods for the periodontal microbiological diagnosis is:

- The results are in one week.
- The samples not require live bacteria..
- Only supragingival samples analyzed.
- They allow us to make an antibiograma.**
- It provides improved anaerobic bacteria detection.



Called bitewing radiographs may be useful in the periodontal diagnosis because we can see clearly the bony ridge in relation to:

- The pulp camera.
- The root tips.
- The condyles.
- The interdental space.
- The cemento-enamel junction.**



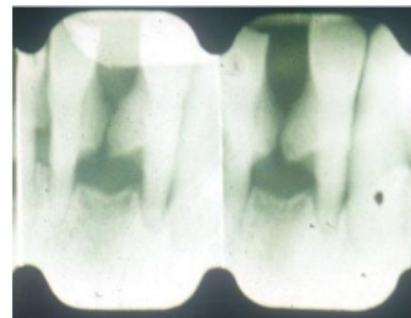
The findings of radiographic study we see in the picture, along with probing depth values less than 3 mm and the presence of bleeding on probing, are compatible with the diagnostic :

- Periodontal health.
- Gingivitis.**
- Periodontitis.
- Trauma from occlusion.
- None of the above.



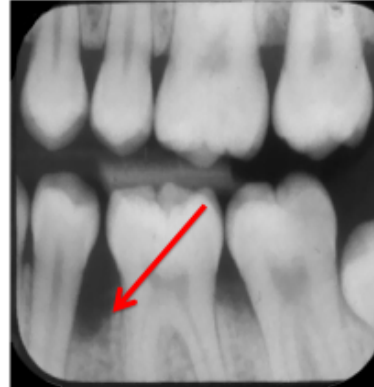
The presence of radiopaque images seen in the teeth in this radiography, would lead us to the existence of:

- Dental caries.
- Gingivitis.
- Artifacts of technique.
- Calculus.**
- Orthodontics appliances.



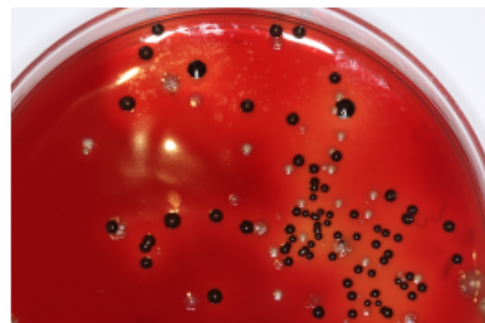
The bone defect is indicated by the arrow in the picture below is usually a common finding in patients with:

- Gingivitis.
- Periodontitis**
- Poor hygiene oral.
- Trauma from occlusion.
- Wisdom teeth impacted.



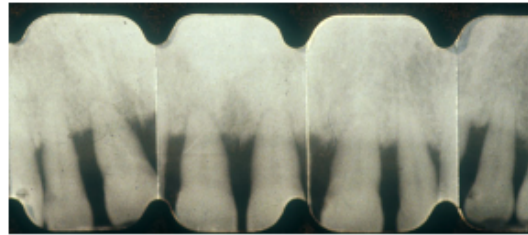
Methods of advanced periodontal diagnosis called, may be useful for diagnosing periodontitis all, but will be especially useful in patients with:

- Chronique periodontitis.
- Moderate periodontitis.
- Refractory periodontitis.**
- Generalized periodontitis.
- They are useful only in gingivitis.



In the following image, we can say that the pattern of bone loss in the sextant will be:

- Horizontal.
- Angular.
- Vertical.
- Regular.
- Big.



Samples for microbiological analysis of periodontitis, be taken with paper points and preferentially in any of the following locations:

- Those not very deep.
- Those with bleeding on probing.
- In anterior teeth for a better access.
- All in the same quadrant.
- Interdental areas.



In the radiographic study, the image we see suggests the existence of:

- Radicular resorption.
- Gingivitis.
- Furcation lesions.
- Dental caries.
- None of the above is correct.



## ENFERMEDADES PERIIMPLANTARIAS

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Bibliografía recomendada:

- Berglundh T, Zitzmann NU, Donati M. Are peri-implantitis lesions different from periodontitis lesions? *J Clin Periodontol.* 2011; 38 Suppl 11:188-202.
- Lang NP, Berglundh T; Working Group 4 of Seventh European Workshop on Periodontology. Periimplant diseases: where are we now?-----Consensus of the Seventh European Workshop on Periodontology. *J Clin Periodontol.* 2011 Mar; 38 Suppl 11:178-8.
- Serino G, Turri A, Lang NP. Probing at implants with peri-implantitis and its relation to clinical peri-implant bone loss. *Clin Oral Implants Res.* 2013 Jan;24(1):91-5.
- Mombelli A, Müller N, Cionca N. The epidemiology of peri-implantitis. *Clin Oral Implants Res.* 2012;23 Suppl 6:67-76

Which of the following sentences is true:

- Implant movility is always a sign of peri-implantitis
- The implant crevice should never be probed using a metallic probe to avoid damaging the surface
- Bleeding on probing is always a sign of peri-implantitis
- Probing pressure around implants should not be higher than 25N**
- It is enough to probe one site to diagnose peri-implantitis

Which of the following symptoms/signs is the most important or definitive to do the differential diagnosis between mucositis and peri-implantitis?

- Pain
- Bleeding on probing
- Probing depth higher than 4mm
- Supuration
- Bone loss not due to physiological bone remodeling**

Peiri-implantitis and periodontitis lesion are similar and different, Which of the next sentences is correct:

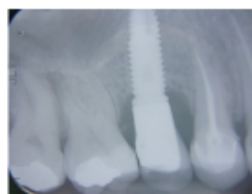
- Inflammatory cell infiltrate in periodontitis extends more apically than in peri-implantitis
- Neutrophil rate is lower in peri-implantitis
- Inflammatory cell infiltrate in peri-implantitis is limited to the lateral pocket Wall
- All of them are true
- All of them are false

#### CASE 1

Patient attending supportive periodontal therapy appointment shows swelling and redness in the mucosa around implant 15 position. On examination, we find bleeding on probing and pocket depth of 6mm.

Xray 1 was taken at the prosthesis fit appointment. Xray 2 was taken three years later. Is there bone loss around implant?

- Yes
- No.



1

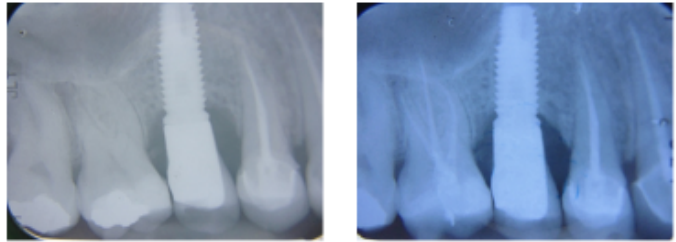


2

CASE 1

Which is the diagnosis of implant in 15 position?

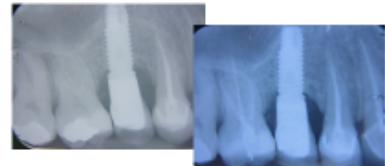
- Peri-implant health
- Mucositis
- Peri-implantitis



CASE 1

What would be the treatment of choice for this implant?

- None, it is healthy
- Remove the prosthesis, debridement (non surgical treatment) and oral hygiene instructions.
- Surgical treatment
- Antibiotic treatment
- None of above



CASE 2

Patient attending periodontal supportive therapy presents redness , swelling, bleeding on probing, supuration and probing depth of 6mm around implant 32 and 42. Based on Xray examination, Is there bone loss around implant 32?

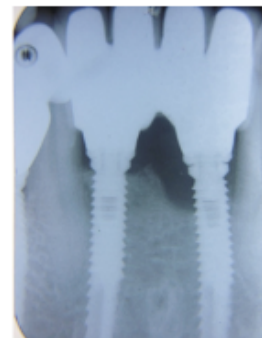
- Yes
- No



CASE 2

Which is the diagnose of the implant on position 32?

- Peri-implant health
- Mucositis
- Peri-implantitis



## CASE 2

Which would be the treatment of choice for this implant?



- None, the implant is healthy
- Remove the prosthesis, debridement (non surgical treatment) and oral hygiene instructions.
- Surgical treatment.
- Antibiotic treatment alone.
- None of the above.

Which of the following sentences is true:

- Implants don't need hygiene control to remove the biofilm
- To treat mucositis non surgically we use the same materials that we use to treat gingivitis
- According to the available research studies, there is no disinfection technique of the implant surface which showed more efficacy than the others.
- Once mucositis is treated, supportive therapy is not needed
- All of them are false

## HALITOSIS

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Bibliografía recomendada:

- Fundamentals of Breath Malodour. *The Journal of Contemporary Dental Practice*, 2001; 2 (4), 1-13.
- Seemann R, Conceicao MD, Filippi A, Greenman J, Lenton P, Nachnani S, Quirynen M, Roldan S, Schulze H, Sterer N, Tangerman A, Winkel EG, Yaegaki K and Rosenberg M Halitosis management by the general dental practitioner—results of an international consensus workshop. *J. Breath Res.* 2014; 8 017101 (6pp)

## Halitosis

Imagine a patient whose chief complaint is “bad brath”, Which should be done first in order to obtain a diagnosis?

- To perform organoleptic measures.
- To use a chromatograph.
- To use the Halimeter™.
- To use the OralChroma™.
- To perform an intraoral exam.

In relation to organoleptic measures, please indicate the correct answer

- They range from 0 to 2.
- They are used to evaluate the odor of tongue coating and the exhaled breath.
- Patient should not use mouthrinses in the previous 2 hours.
- Patient should not eat in the previous 24 hours.
- All answers are correct.

Imagine a patient with gingivitis, whose chief complaint is gingival bleeding. If during the intraoral exam, bad breath is observed, which would probably be his/her diagnosis?:

- Physiologic halitosis.
- Oral physiologic halitosis.
- Oral pathologic halitosis.
- Pseudohalitosis.
- Halitophobia.

Pseudo-halitosis is diagnosed if after the treatment of genuine halitosis, the patient still believes that he or she has bad halitosis, although there is no evidence that this is true.

- True.
- False.

In cases of halitophobia, the intensity of bad breath is under the socially-accepted limits nowadays.

- True.
- False.

The treatment of a patient with oral pathologic would be:

- TN-1.
- TN-1+ TN-2.
- TN-1 + TN-3.
- TN-1 + TN-4.
- TN-1 + TN-5.

Which would be the treatment of halitosis in a patient with caries, gingivitis and halitosis,

- Tongue cleaning.
- Dental Prophylaxis.
- Fillings.
- Oral hygiene instructions.
- All answers are true.

In the treatment of halitosis, chlorhexidine would be beneficial as its:

- Reduces substrate availability.
- Reduces the presence of bacteria.
- Interferes with the production of volatile sulphur compounds (VSCs).
- Interferes with the capacity to volatilize from VSCs.
- All answers are true.

Which would be the treatment of a patient with halitophobia?

- TN-1+ TN-2.
- TN-1 + TN-3.
- TN-1 + TN-4.
- TN-1 + TN-5.
- Halitophobia does not require any sort of treatment from the dentist.

Considering the visual exam of this patient, Which type of halitosis would you diagnose?

- It is not likely that this patient has halitosis.
- Physiologic halitosis.
- Oral pathologic halitosis..
- Extra-Oral pathologic halitosis.
- Pseudohalitosis.



## RASPADO Y ALISADO RADICULAR

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### Bibliografía recomendada:

- Drisko C.L. Periodontal debridement: still the treatment of choice. *J Evid Based Dent Pract.* 2014 Jun;14 Suppl:33-41.
- Sanz I., Alonso B., Carasol M., Herrera D, Sanz M. *Nonsurgical treatment of periodontitis. J Evid Based Dent Pract.* 2012 Sep:12 (3 Suppl):76-86.
- Heitz-Mayfield LJ1, Trombelli L, Heitz F, Needleman I, Moles D. A systematic review of the effect of surgical debridement vs non-surgical debridement for the treatment of chronic periodontitis. *J Clin Periodontol.* 2002; 29 Suppl 3:92-102; discussion 160-2.
- Petersilka GJ1, Ehmke B, Flemmig TF. Antimicrobial effects of mechanical debridement. *Periodontol 2000.* 2002;28:56-71.
- Cobb CM. Clinical significance of non-surgical periodontal therapy: an evidence-based perspective of scaling and root planing. *J Clin Periodontol.* 2002 May;29 Suppl 2:6-16.
- Drisko CH. Nonsurgical periodontal therapy. *Periodontol 2000.* 2001;25:77-88.

¿This curette, what kind of teeth is used?

- Anterior teeth.
- Posterior teeth.



¿This curette, what kind of teeth is used?

- Anterior teeth.
- Posterior teeth.



¿ What kind of support can be seen in the image?

- Extrabuccal.
- Intrabuccal.



¿ What kind of support can be seen in the image?

- Extrabuccal.**
- Intrabuccal.



¿This angulation of work curette is correct?

- Yes.
- No.**



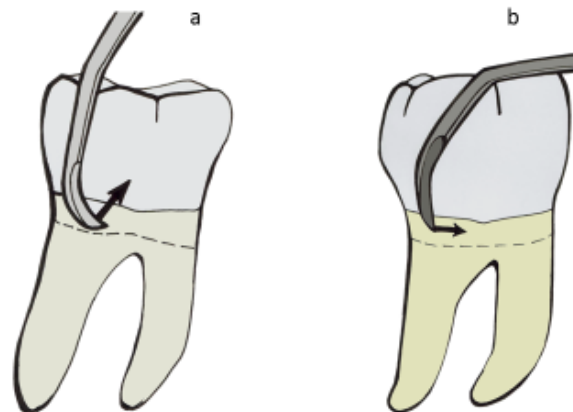
The image shows one of the possible complications of scaling and root planing ... what is this?

- Gingival inflammation.
- Inflammation of the periodontal ligament.
- Periodontal abscess.**
- Injury of the epithelial attachment.
- Bleeding.



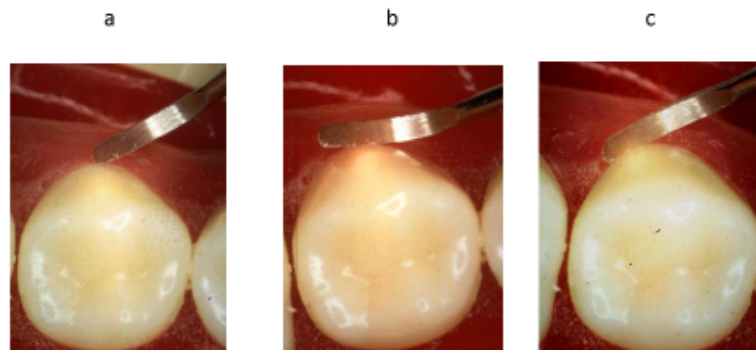
¿Which picture reflects the best direction of scaling movement?

- Picture a.**
- Picture b.



¿ Which of these images shows the right way to adapt the blade of the curette to the tooth to, after, to the activation movements?

- Photo a.
- Photo b.
- Photo c.



¿Do you think that the curette 9-10 is positioned such that the angle of "work" of the blade with the root surface is correct?

- Yes.
- No.



¿Do you think that the curette 5-6 is positioned such that the angle of "work" of the blade with the root surface is correct?

- Yes.
- No.



¿Which of the following assertions about the curette is incorrect?

- The specific curettes have a curvature of the blade in two planes.
  - The universal curettes have an angle of 70 degrees between the terminal shank and the face of the blade.
  - The curette Columbia 4L-4R can be used on all surfaces and areas.
  - To identify the cutting edge of a curette we can look at the sheet from above, with the face of this parallel to floor.
  - To identify the cutting edge of a curette we can look at the sheet in front, placing the terminal stem perpendicular to the floor.
-

## CASOS CLÍNICOS REALES

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### Caso 1

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#### PERSONAL DATA

NAME: G. A.

AGE: 40 years.

GENDER: Male.

OCCUPATION: Pharmaceutical.

CURRENT DISEASES: None

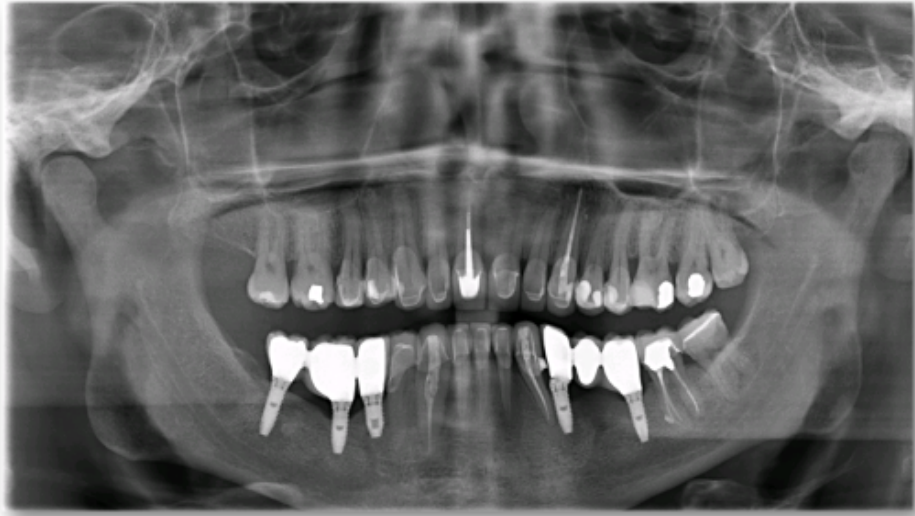
FAMILY BACKGROUND: None

HARMFUL HABITS: Tobacco (10 cig./day, since he was 25years).

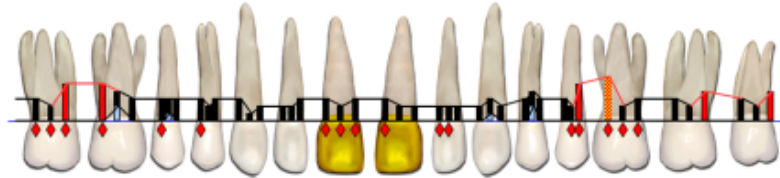
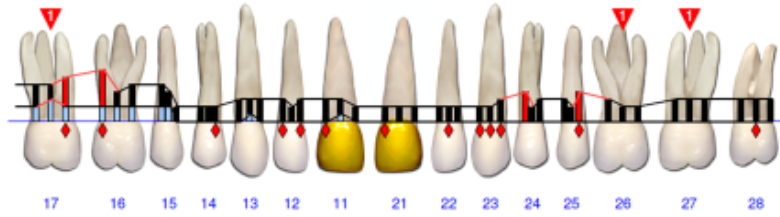
PREVIOUS PERIODONTAL TREATMENTS: Patient comes to peridontal supportive therapy, although he has missed his appointments during several years.

CHIEF COMPLAINT: *"I feel pain in the gingiva around my lower implants (4th quadrant)"*





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3 2 5    5 2 3    323 323 312 223 3 2 3    3 2 2    222 222 323 325 6 2 3    3 2 4    3 2 4  
 0 0 0    0 2 0    010 000 000 000 0 0 0    0 0 0    000 010 020 000 0 0 0    0 0 0    0 0 0

■ Bleeding on probing: 56%    ■ Plaque index: 18%    ■ Suppuration index: 0%



In case you did not check the box: "Diseased":

**These are not healthy peri-implant tissues, as there is clinical inflammation, peri-implant pockets and radiographic bone loss.**

Which type of peri-implant disease does this patient have?

- Mucositis.
- Periimplantitis.**
- There is only a problem in the fitting of dental crowns over implants, and this induce inflammation of peri-implant mucosa.

In case you did not check the box: "Periimplantitis":

**There is peri-implantitis on the implant located at the level of 46, as radiographic bone loss can be observed.**

Which of these signs are compulsory in order to diagnose periimplantitis?

- Bleeding on probing.
- Increased probing pocket depth.
- Bone loss.**
- Suppuration.
- All of them.

In case you did not check the box "Bone loss":

**Periimplantitis should be diagnosed based on a radiograph taken the day of implant loading. This radiograph is considered the baseline to compare bone levels in subsequent appointments.**

**Therefore, in order to diagnose periimplantitis, there should be radiographic bone loss. There would also be increased probing pocket depth, bleeding on probing, and sometimes, suppuration. However, these latter signs are also common in cases of mucositis.**

Which factor may be related to the onset of this periimplant disease?:

- Tobacco and poor oral hygiene.
- Tobacco and lack of keratinized tissue around the implants.
- Tobacco, history of periodontitis (lack of supportive periodontal and periimplant therapy) and lack of keratinized mucosa around implants.

In case you did not check the box: "Tobacco, history of periodontitis (lack of supportive periodontal and periimplant therapy) and lack of keratinized mucosa around implants.":

**Risk factor with strong evidence of association with periimplantitis are: tobacco, previous history of periodontitis and poor oral hygiene.**

**In the picture, it is also evident the lack of keratinised mucosa around the implants, which represent a risk factor with limited evidence of association with periimplantitis.**

Which other diagnostic tests might be used in this case?:

- Genetic diagnosis.
- Microbiological diagnosis.
- Immunological diagnosis.
- There is no need to do any further diagnostic test.
- All types of diagnostic tests are needed.

In case you did not check the box: "There is no need to do any further diagnostic test.":

**The diagnosis of periimplantitis is mainly based on clinical and radiographical signs and symptoms**

Please indicate the sequence of treatment that needs to be followed in this patient:

- |  |  |
|--|--|
| 1 Information.   | 4 Supragingival prophylaxis.   |
| 2 Systemic phase.                                      | 5 Scaling and root planing.  |
| <input type="checkbox"/> To controll oral infections.  | 6 Antiseptics as adjuncts to periodontal therapy.                        |
| 3 Oral hygiene instructions.                           | <input type="checkbox"/> Antibiotics as adjuncts to periodontal therapy. |
| <input type="checkbox"/> Removal of retentive factors. | 8 Resective surgery.   |
| <input type="checkbox"/> Occusal adjustment.           |  |
-

## Caso 2

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### PERSONAL DATA

Name: C. A.

Age: 43 years.

Gender: Male

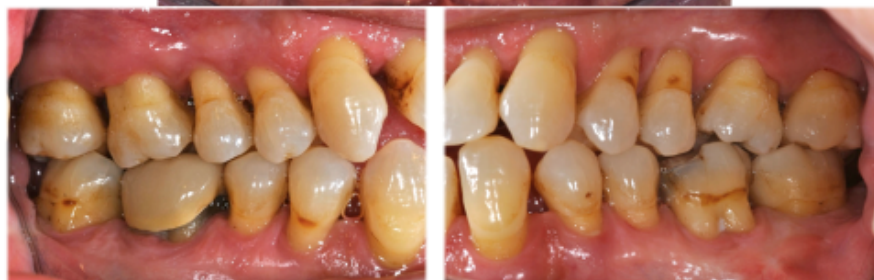
Occupation: Engineer

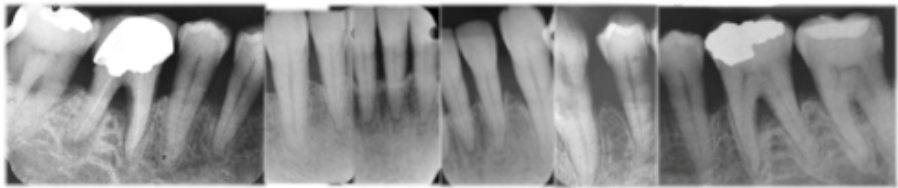
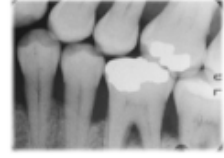
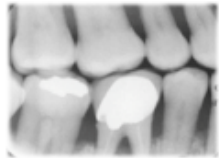
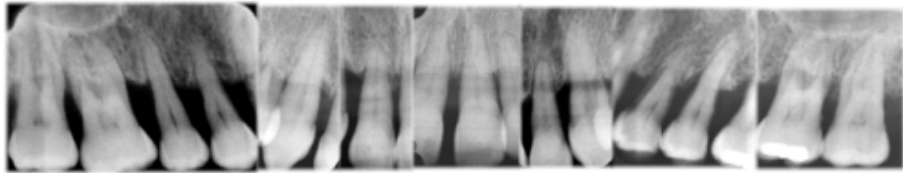
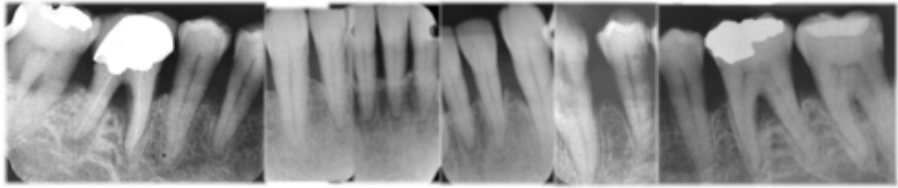
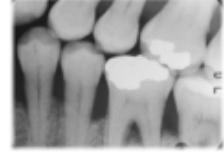
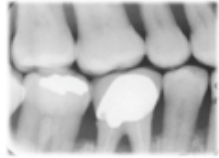
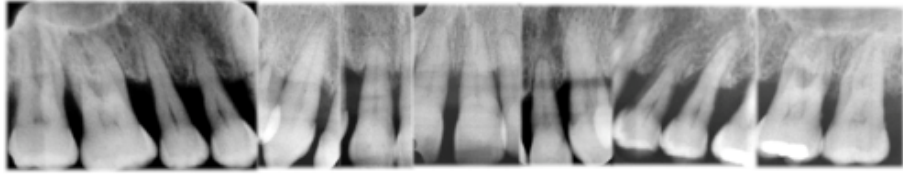
Current diseases: Diabetes Mellitus II (poorly controlled).

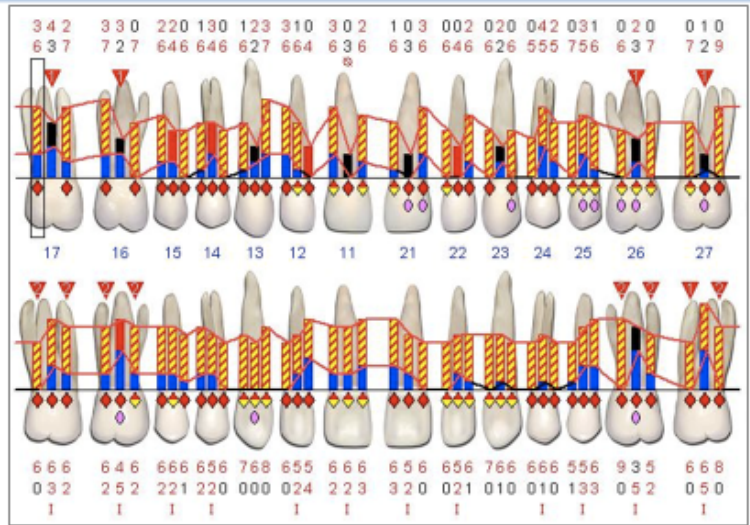
Family background: None

Harmful habits: Bruxism, Tobacco (1 pack/day, since he was 23years).

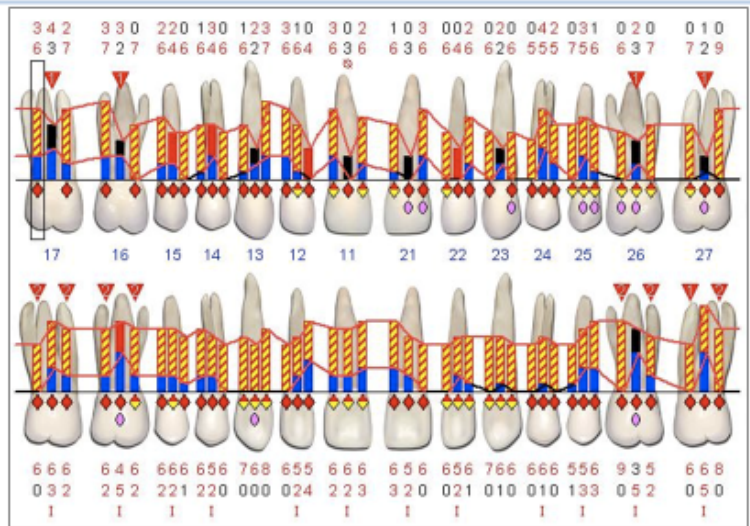
CHIEF COMPLAINT: *"The space between my incisors is increasing"*.







■ Bleeding on probing: 96%    
 ■ Plaque index: 9%    
 ■ Suppuration index: 28%



■ Bleeding on probing: 96%    
 ■ Plaque index: 9%    
 ■ Suppuration index: 28%

According to his periodontal situation, this patient is:

- Healthy.
- Diseased.

In case you did not check the box: "Diseased":

**This patient is not healthy, because there is clinical inflammation, periodontal pockets and radiographic bone loss.**

Which type of disease does this patient have?

- Gingivitis.
- Periodontitis.**
- Other types.

In case you did not check the box: "Periodontitis":

**This patient has periodontitis. This can be assessed by the presence of general inflammation, the presence of periodontal pockets, recession and bone loss (as it can be observed in clinical attachment levels and in periapical x-rays).**

Which type of periodontitis does this patient have?

- Chronic periodontitis.
- Aggressive periodontitis.
- Periodontitis as a manifestation of systemic diseases.

In case you did not check the box: "Chronic periodontitis":

**The patient does not have aggressive periodontitis as he did not present the primary features of this diseases. In addition, he does not present periodontitis as a manifestation of systemic diseases, as Diabetes mellitus is a modifying factor of periodontitis.**

In terms of extension, Is it a chronic periodontitis:

Generalized?.

Localized?.

In case you did not check the box: "Generalized":

**This is a generalized chronic periodontitis, because more than 30% of locations are affected.**

In terms of severity, Is it a chronic periodontitis:

- Mild?.
- Moderate?.
- Advanced?**.

In case you did not check the box: "Advanced":

**This is a advanced chronic periodontitis, as the bone loss is >50%.**

Which other diagnostic tests might be used in this case?

- Genetic diagnosis.
- Microbiological diagnosis.**
- Immunological diagnosis.
- There is no need to do any further diagnostic test.
- All types of diagnostic tests are needed.

In case you did not check the box: "Microbiological diagnosis":

**The microbiological diagnoses would be beneficial, because the patient present an advanced periodontitis.**

**Patients with aggressive and/or advanced periodontitis and those with systemic diseases, would benefit from a microbiological diagnosis in order to specifically treat their pathology.**

## MICROBIOLOGICAL DIAGNOSIS

Total anaerobic counts:  $2.4 \times 10^7$  CFU/ml

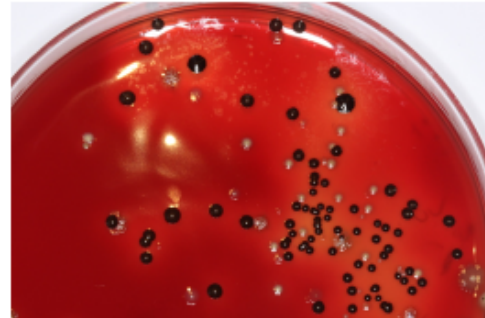
*Porphyromonas gingivalis* : 7.98%

*Prevotella intermedia*: 8.24%

*Tannerella forsythia*: 2.9%

*Parvimonas micra*: 2.3%

*Fusobacterium nucleatum*: 0.2%



Please indicate the sequence of treatment that needs to be followed in this patient:

- |  |   |
|--|---|
| 1 Information.   | 4 Supragingival prophylaxis.                      |
| 2 Systemic phase.                                      | 5 Scaling and root planing.                       |
| <input type="checkbox"/> To controll oral infections.  | 6 Antiseptics as adjuncts to periodontal therapy. |
| 3 Oral hygiene instructions.                           | 7 Antibiotics as adjuncts to periodontal therapy. |
| <input type="checkbox"/> Removal of retentive factors. | 8 Resective surgery.                              |
| <input type="checkbox"/> Occusal adjustment.           |   |

## Caso 3

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### ANAMNESIS

NAME : P. P.

AGE: 24 years.

SEX: Woman.

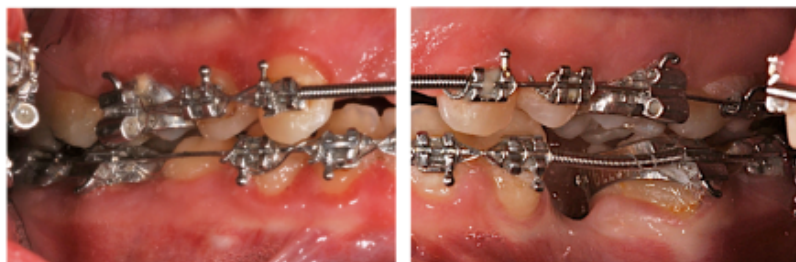
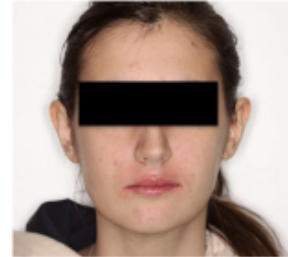
PROFESSION: Student.

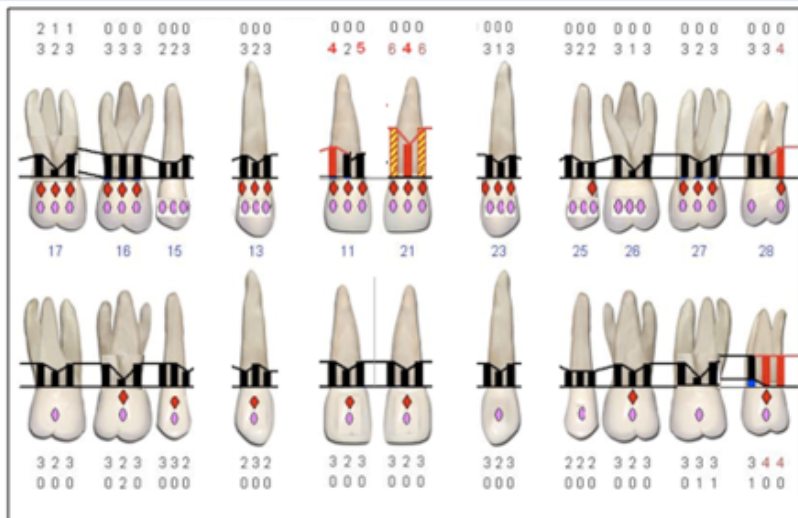
CURRENT DISEASES: Hypothyroidism (Eutirox®).

FAMILY HISTORY: None.

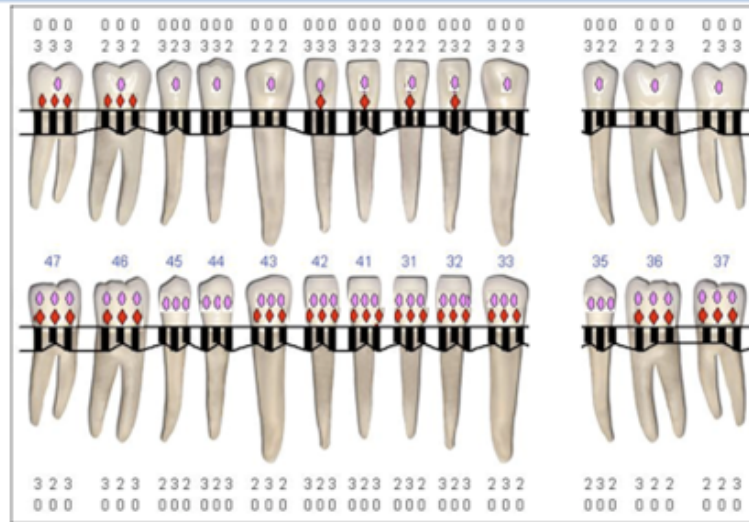
HARMFUL HABITS : None.

CAUSE OF CONSULTATION : "My gums bleed when I brush".





■ Bleeding Index : 98%
 ■ Index plaque : 100%



Regarding their periodontal condition, the patient is :

- Healthy.
- Diseased.

In case of not activate the "Diseased" box:

**There is no periodontal health, since there are clinical inflammation, gingival redness and swelling.**

¿ What kind of periodontal disease presents?:

- Gingivitis.
- Periodontitis.
- Another conditions.

In case of not activate the "Gingivitis" box:

**It is gingivitis by general inflammation. Does not exist bone loss ( as seen in the radiography).**

¿ What kind of gingivitis presents?:

- Plaque-induced gingival disease.**
- Not induced gingival plaque disease.

In case of not activate the "Plaque-induced gingival disease " box:

**The patient presents plaque-induced gingivitis because we can observe the accumulation of plaque on the gums. Furthermore, we does not observed gingival lesions of bacterial origin, fungal, viral, genetic or gingival manifestations of systemic diseases.**

¿ What kind of plaque-associated gingivitis it would be?:

- Gingivitis associated with plaque only.
- Gingival disease associated with systemic factors.
- Gingival disease modified by drugs.
- Gingival disease modified by malnutrition.

In case of not activate the “Gingivitis associated with plaque only” box:

**It is gingivitis associated with dental plaque only because the patient does not present systemic modifiers factors typically associated with gingivitis such as puberty or pregnancy, or takes medications that cause gingival enlargement or has problems of nutritional deficiencies.**

It is gingivitis associated with dental plaque only:

- Without other contributing factors
- With local contributing factors.**

In case of not activate the “With local contributing factors” box:

**It is gingivitis dental plaque associated exclusively with another local contributing factor: orthodontic devices, which promote the accumulation of plaque making it more difficult oral hygiene techniques.**

According to the extent, it is gingivitis :

- Generalized.
- Localized.

In case of not activate the "Generalized" box:

**It is generalized because it affects more than 30% of the locations.**

What additional diagnostic tests we would need to complete the diagnosis of this patient ?:

- Genetic diagnostics.
- Microbiological diagnostics.
- Immunological diagnostics.
- They are not indicated.**
- They are all needed.

In case of not activate the “They are not indicated” box:

**In patients with plaque-induced gingivitis it is not necessary to carry out other diagnostic tests.**

Enumerate the treatment sequence that will follow in this patient:

1 Patient information.

Systemic control phase.

Control of oral infections.

2 Oral hygiene instructions.

Elimination retentive factors.

Occlusal stabilization.

3 Supragingival prophylaxis.

4 Scaling and root planing.

5 Adjuvant treatment with antiseptics.

Adjuvant treatment with antibiotics.

Pocket reduction surgery.

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## Caso 4

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### ANAMNESIS

NAME: S.A.

AGE: 20

SEX: female

**PROFESSION:** student

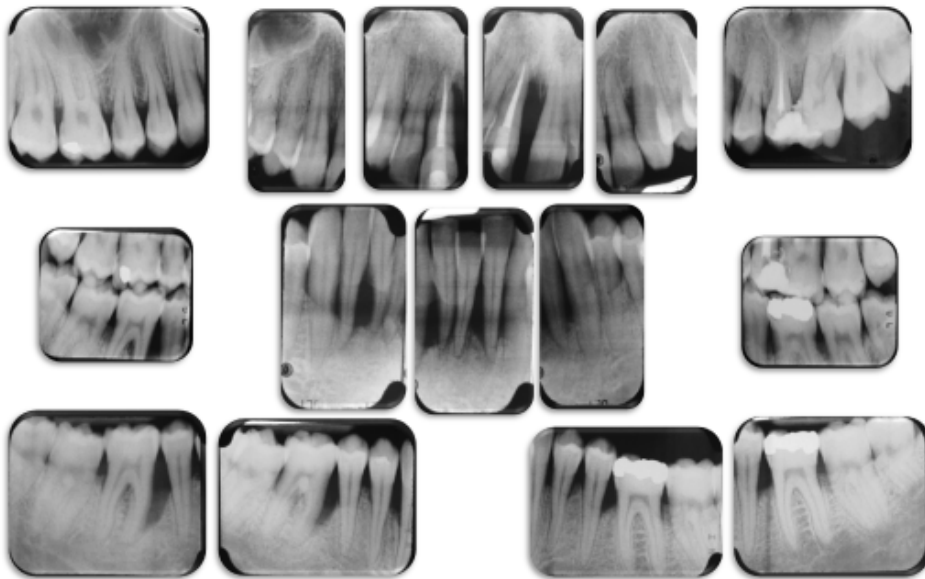
CURRENT DISEASES: none

FAMILY HISTORY: father diagnosed with chronic periodontitis

HABITS: smoker 20 cigarettes/day since 5 years ago

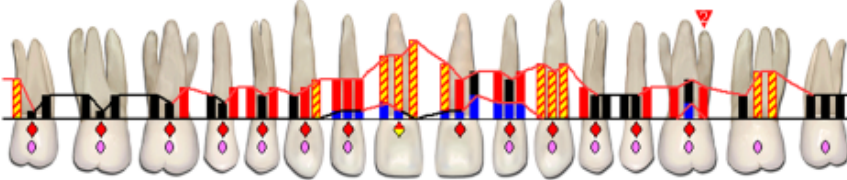
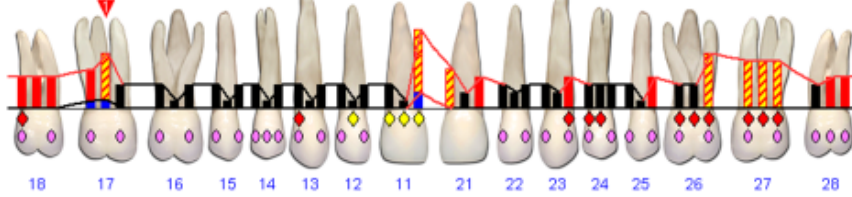
REASON FOR ATTENDANCE *"My teeth move"*.





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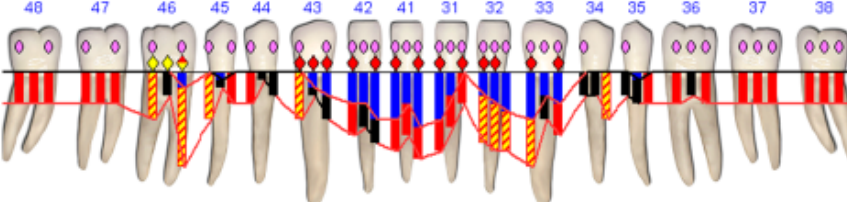
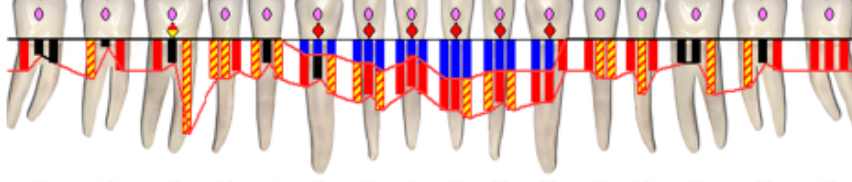


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■ Sites with bleeding on probing: 76%   ■ Plaque index: 68%   ■ Sites with supuration: 10%

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■ Sites with bleeding on probing: 76%   ■ Plaque index: 68%   ■ Sites with supuration: 10%

The periodontal status of this patient is:

- Healthy
- Periodontal Disease

If you did not choose the option "periodontal disease":

**She is not periodontally healthy, as there is inflammation, periodontal pockets and radiographic bone loss**

Which type of periodontal disease does the patient suffer?

- Gingivitis
- Periodontitis
- Other type

If you did not choose the option "Periodontitis"

**Es periodontitis por la inflamación generalizada, la presencia de bolsas periodontales, recesiones y pérdida ósea (como se observa tanto en los niveles clínicos de inserción como en la exploración radiográfica).**

**(It is Periodontitis because there is generalized inflammation, periodontal pockets, recession and bone loss (as we can see with clinical attachment level and radiography))**

Which type of periodontitis is it?

- Chronic Periodontitis
- Aggressive Periodontitis
- Periodontitis as a manifestation of a systemic disease

If you did not choose the option "Aggressive Periodontitis"

**The patient shows Aggressive Periodontitis because we find the three defining characteristics of the disease, which are:**

- a) Patient is systemically healthy,
- b) Family aggregation,
- c) Fast attachment loss, **noticing the youth of the patient**. The best would be having previous Xrays, to compare with the current examination, and determine attachment loss progression rate .

Regarding to extention of the disease: Is it?

Generalized

Localized

If you did not choose "Generalized":

It is generalized as it affects more tan 30% of the sites

Which other diagnostic tests are needed to fulfill the diagnosis?

- Genetic tests
- Microbiologic diagnostic tests
- Immunologic diagnostic tests
- It is not recommended
- All of them

If you did not choose "Microbiologic diagnostic tests"

It would be interesting to perform microbiologic analysis as it is an aggressive periodontitis. Patients with aggressive periodontitis and/or severe, recidivant or refractory, and associated to systemic diseases, benefit from microbiological approach and consequent treatment

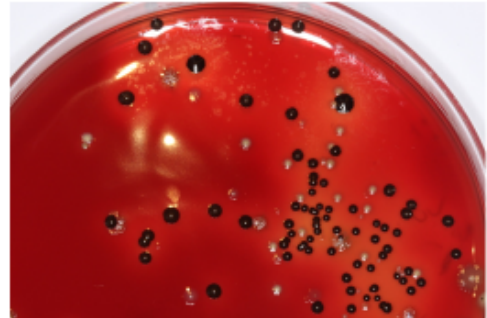
## MICROBIOLOGIC DIAGNOSIS

Total anaerobic counts :  $1.1 \times 10^8$  UFC/ml

*Porphyromonas gingivalis* : 4.34%

*Prevotella intermedia*: 16.65%

*Fusobacterium nucleatum*: 0.66%)



In which order would you do the following treatment steps?:

- |   |                                    |
|---|------------------------------------|
| 1 Patient information                                   | 5 Prophylaxis                      |
| 2 Systemic factors control phase                        | 6 Scaling and root planning        |
| <input type="checkbox"/> Other oral Infection treatment | 7 Antiseptic coadyuvant treatment. |
| 3 Oral hygiene instructions.                            | 8 Antibiotic coadyuvant treatment. |
| <input type="checkbox"/> Retentive factors elimination. | 9 Pocket elimination surgery       |
| 4 Occlusal stability.                                   |                                    |