

牙周疾病與治療

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簡介牙周疾病

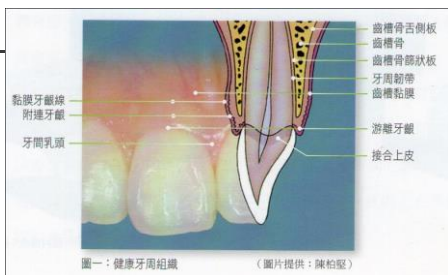
- 前言
- 牙周病的症狀與成因
- 牙周病的診斷與治療
- 口腔衛教
- 結語與討論

簡介牙周疾病

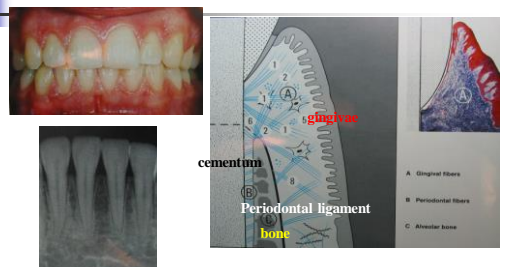
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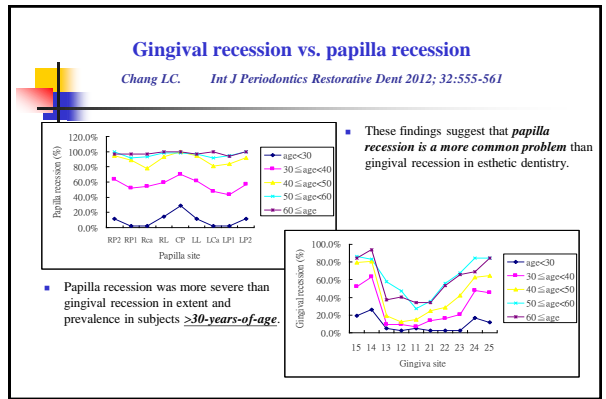
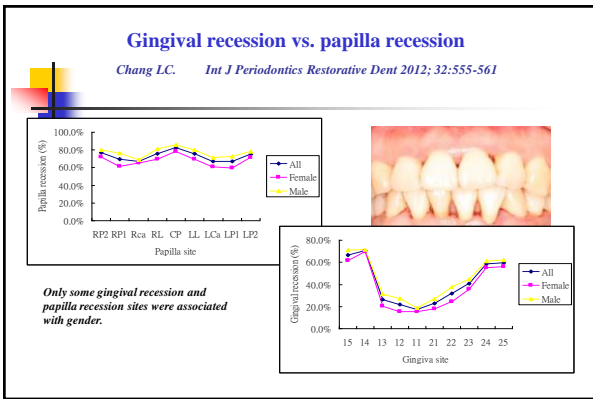
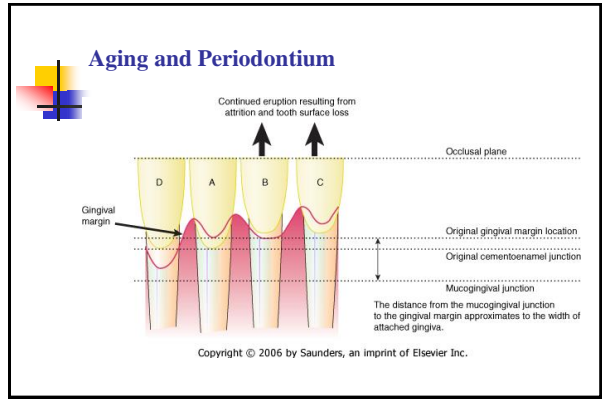
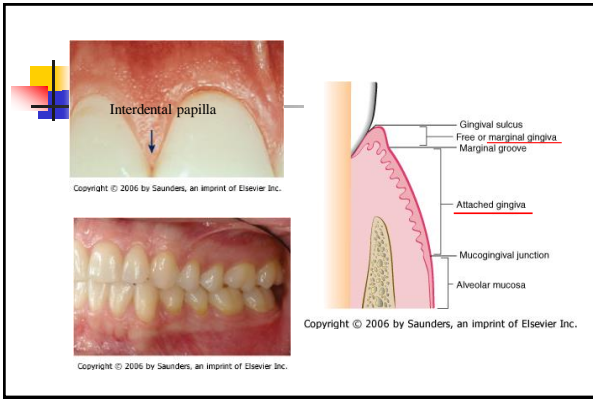
健康的牙周組織 (Periodontium)

- Cementum (牙骨質)
- Periodontal membrane (牙周膜); periodontal ligament(牙周韌帶)
- Alveolar bone (齒槽骨): 0.02 mm / per year (生理性吸收)
- Gingiva (牙齦): pink color, firm consistency, stippled appearance, knife-edge margin



Healthy periodontium





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牙齦炎的定義 (Gingivitis)

牙周組織發炎但未破壞 (reversible)

Gingivitis



牙周炎的定義 (Periodontitis)

牙周組織發炎且破壞
(irreversible)

Periodontitis (牙周炎)



牙周病的症狀與成因

■ 症狀：

Gingiva: inflammation (bleeding, swelling, pain), recession (open embrasure), halitosis (牙齦發炎, 流血, 萎縮, 牙縫變大, 口腔臭味, 牙周膿腫)

Tooth: root exposure, tooth hypersensitivity, tooth mobility, pathologic migration, tooth loss (牙根裸露, 敏感, 牙齒動搖, 位移, 掉落)

Others: biting weakness, cellulitis ... (咬合無力, 蜂窩性組織炎)

■ 成因：

牙菌斑 (*dental plaque*) : necessary but not sufficient for disease activity to occur

健康牙周組織 vs. 牙周病



牙菌斑

■ Dental plaque (牙菌斑) :

a structured, resilient, yellow-grayish substance (biofilm) that adheres tenaciously to the intraoral hard surfaces

■ Materia alba (白質) :

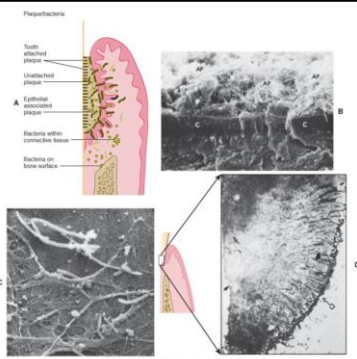
soft accumulations of bacteria and tissue cells that lack the organized structure of dental plaque and easily displaced with a water spray

■ Calculus (牙結石) :

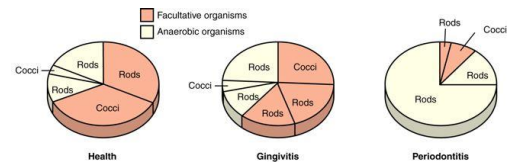
a hard deposit that forms by mineralization of dental plaque, and it is generally covered by a layer of unmineralized plaque

牙菌斑

- Dental plaque is composed primarily of microorganisms. One gram of plaque (wet weight) contains approximately 2×10^{11} bacteria.
- More than 500 different bacterial species may be found in plaque
- One individual may harbor 150 or more species
- Nonspecific vs. specific plaque hypothesis



Relative proportion of different morphotypes in subgingival samples



Etiologic agents of destructive periodontal diseases

- *Aggregatibacter actinomycetemcomitans* (*Actinobacillus actinomycetemcomitans*)
- *Prophyromonas gingivalis*
- *Prevotella intermedia*
- *Fusobacterium nucleatum*
- *Bacteroids forsythus*
- *Campylobacter rectus*
- *Tannerella forsythia* (*Tannerella forsythensis*)

牙周病的破壞機轉

(Pathogenic bacterial mechanisms in periodontal disease)

- Invasion (侵入)
- Production of exotoxins (內毒素)
- Role of cell constituents (endotoxins, surface components, capsular components, etc)
- Production of enzymes (酶)
- Evasion of immunologic host responses (免疫反應)

Hematologic disorders (血液疾病)



Desquamative Gingivitis (脫屑性牙齦炎)



簡介牙周疾病

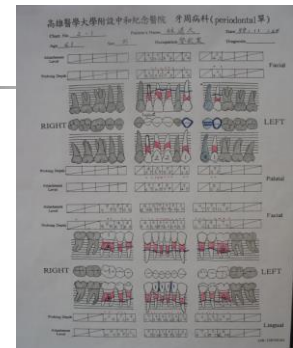
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牙周病的診斷方法

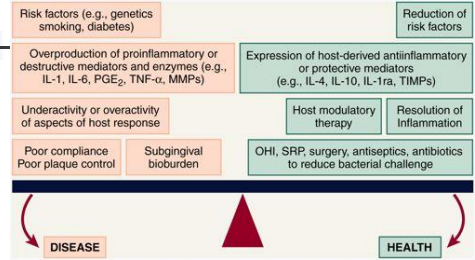
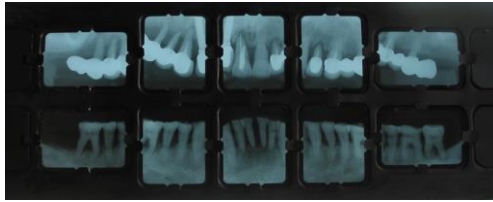
- 臨床檢查：
牙周探針 (probe)
- X光檢查
- 實驗室檢查
- 研究模型
- 其他



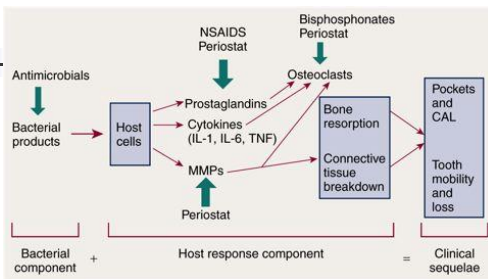
Special Charting (pre-treatment)



治療前之全口X光片



疾病 vs. 健康



病菌 + 宿主反應 = 臨床結果

Treatment planning for gingivitis and periodontitis

- Systemic treatment phase
- Hygienic treatment phase
- Corrective treatment phase
- Maintenance or supportive treatment phase

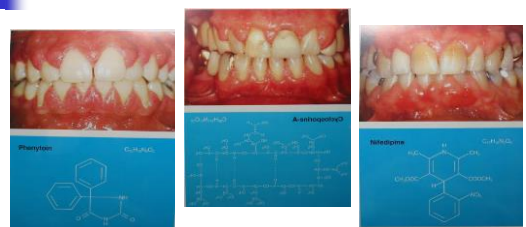
Risk Factors for Periodontal Disease

牙周病的危險因子

- Heredity (遺傳): family history, PST test
- Smoking (抽菸): frequency, current history, past history
- Diabetes (糖尿病): duration, control
- Stress (壓力): reported by patient
- Medications (藥物): calcium channel blockers, dilantin, cyclosporin, drugs known to cause dry mouth
- Nutrition: Vitamin C
- Poor oral hygiene: plaque and calculus
- Faulty dentistry: overhangs, subgingival margins
- Hormonal variations: pregnancy (懷孕: increased estradiol and progesterone), menopause (停經: decreased estrogen, osteoporosis)
- Immunocompromise: HIV, neutropenia
- Connective tissue diseases
- Previous history of periodontitis

Drug-induced gingival enlargements

(藥物引起牙齦增生)



Gingival disease in pregnancy (懷孕引起牙齦疾病)



圖三：72歲婦女長期服用高血壓藥且牙齒清潔不佳，牙肉多處有疣狀增生。

圖四：16歲高中男生長期服用抗癲癇藥，全口牙齦牙肉有塊狀增生。



圖五：31歲孕婦懷孕八個月，多處牙齦周圍牙肉紅腫增生，觸碰時極易出血，牙齒清潔不易。

圖六：14歲小男孩鼻子有問題，睡覺習慣用口呼吸，常常每天不刷牙，增生牙肉腫脹，底下有很多蛀牙和地槽。

Risk Assessment and Therapy for Periodontitis 牙周病的危險因子

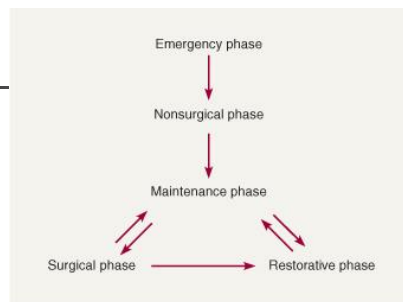
- Heredity: chemotherapeutics
- Smoking: cessation, chemotherapeutics
- Diabetes: improved control, work with physician; chemotherapeutics
- Stress: management, chemotherapeutics
- Medications: change medications, work with physician; chemotherapeutics
- Nutrition: supplements
- Poor oral hygiene: improved oral hygiene, chemotherapeutics
- Faulty dentistry: corrective dentistry
- Hormonal variations: **consult with physician, chemotherapeutics**
- Immunocompromise: consult with physician, chemotherapeutics
- Connective tissue diseases: consult with physician, chemotherapeutics

糖尿病控制標準表

項目	單位	良好	尚可	不好
飯前血糖 (AC)	mg/dl	80-110	<140	>140
飯後血糖 (PC)	mg/dl	80-140	<180	>180
糖化血色素 (HbA1C)	%	<8.5	<7.5	>7.5

全身性疾病與牙周治療注意事項

- 懷孕
- 糖尿病
- 心血管疾病
- 血液疾病
- 放射治療與化療
- 免疫不全
- 服用骨質疏鬆的藥物(雙磷酸鹽類藥物)

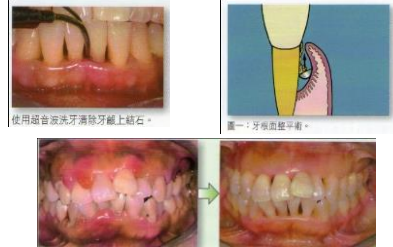


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牙周病的治療

- **Non-surgical periodontal therapy :**
OHI, Scaling & root planing, Chemical therapy (systemic & local), Laser therapy, others
- **Surgical periodontal therapy :**
conventional periodontal surgery, periodontal regeneration, tissue engineering...
- **Periodontal plastic surgery**

第一階段治療(非手術治療)



第二階段治療(手術治療)



牙周整形手術



牙周治療後的反應

- 牙齒敏感 (tooth hypersensitivity) : 3 - 4 M
- 牙周膿包 (periodontal abscess) : 偶而
- 手術後之牙齒動搖度增加 (tooth mobility increase) : 3 - 6 M
- 牙齦退縮 (牙齒變長, 牙縫變大)
- 手術後腫痛
- 其他

牙齒敏感症 (tooth hypersensitivity) 原因與機轉

- 開放性牙本質小管
- 流體動力學理論
- 區別診斷：
齒裂症狀群、齶齒、修復體斷裂、牙冠斷裂、窩洞填補後的敏感、急性功能過度的牙齒、義齒黏著固定後的敏感

牙齒敏感症 (tooth hypersensitivity)

治療方式

- 教育病人：
飲食控制，牙菌斑控制 & 正確的刷牙方式
- 去敏感治療原則：
減少牙本質小管內之液體流動，
降低牙髓內感覺神經的活動
- 去敏感治療：
居家護理 -- 去敏感牙膏
專業治療 -- 化學製劑，物理填補，牙根覆蓋術，雷射...

Supportive periodontal therapy

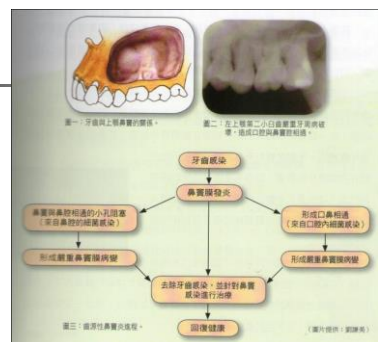
[牙周病之定期維護]

Regardless of the type of treatment provided, periodontal therapy will fail or will be less effective in the absence of adequate supportive periodontal therapy

牙周病為其他疾病之危險因子 (periodontal disease as a risk factor for other diseases)

- Periodontal medicine
- Cardiovascular diseases :
coronary heart disease (CHD), stroke
- Pulmonary disease
- Pre-term low birth weight (PLBW)
- Diabetes

齒源性 鼻竇炎



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口腔保健

- Modified Bass' method(改良式貝氏刷牙法)
- Brush(牙刷)
- Disclosing agent, intraoral mirror
(牙菌斑顯示劑 & 鏡子)
- Single - tufted brush(單束毛牙刷)
- Interproximal brush(牙間刷)
- Dental floss & tape, toothpicks(牙線 & 軟木牙籤)
- Threader(牙橋穿引線)

改良式貝氏刷牙法

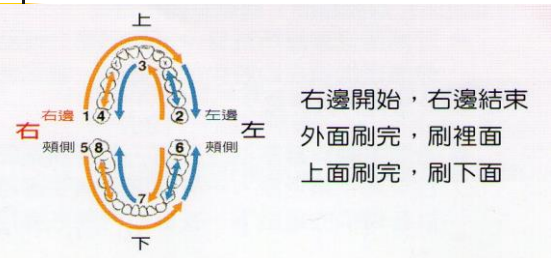
- 刷毛與牙面成45-60度
- 涵蓋一點點牙齦
- 兩顆兩顆來回刷約10次
- 向牙冠方向旋轉

好處 (貝氏刷牙法)

簡單易學，可清除牙齦溝兼牙齦按摩效果。

貝氏刷牙法

刷毛與牙面成45度~60度，涵蓋一點點牙齦，每次兩顆來回刷，原地震動約10次。



牙線操作基本原則

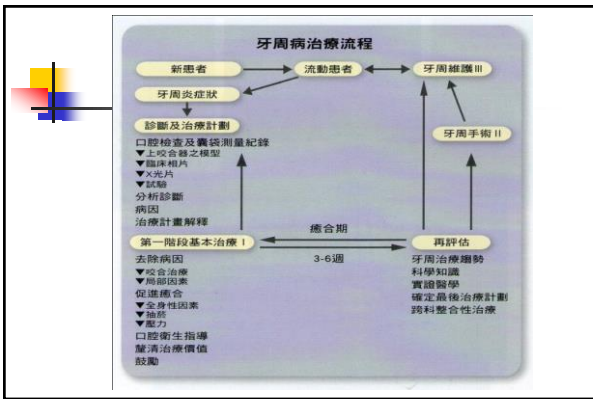
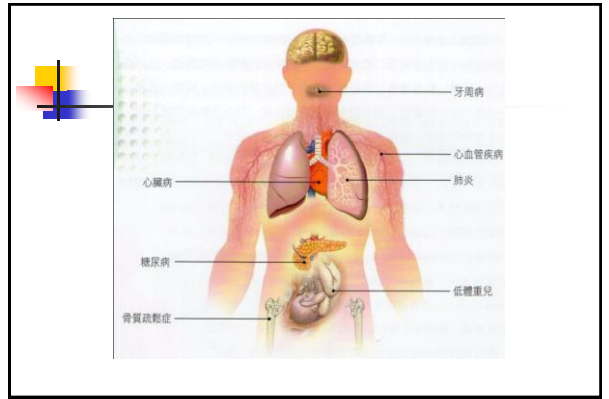
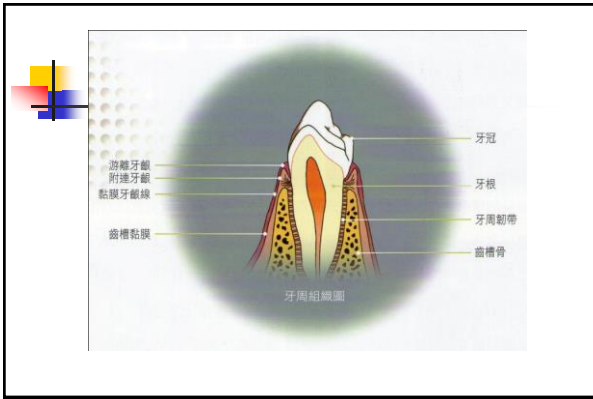
- 牙線僅貼著鄰接面
- 拉成C字形
- 短距離上下刮



- 1 截取約45公分長的牙線 (約與手臂同長)。



- 2 讓牙線繃緊並纏繞在中指第2指節。



牙周治療的三字真言

清 乾 淨 & 善 維 護

THE END

Thank you for your attention



Q & A

- Q1. 引起牙周病的成因？ A1: 牙菌斑
- Q2. 糖尿病與牙周病的關係？ A2: 雙向的關係
- Q3. 更年期婦女會因為什麼改變影響牙齦健康？ A3: 女性荷爾蒙