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美國 西雅圖華盛頓大學 口腔內科學碩士

蔡英文：感謝藥師共同締造販售實名制的歷史紀錄

蘇貞昌：防疫做得好！感謝藥師及鍵盤高手幫忙

陳其邁：藥師生們，謝謝你！

陳時中：感謝藥師配合，實名制會在防疫史留紀錄

林姿妙：感謝藥師挺防疫



感謝有你

# 牙齦及口腔上的疾病與護理

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- 脫屑性牙齦炎  
(Desquamative gingivitis)

- 尋常天皰瘡 (Pemphigus vulgaris)
- 黏膜類天皰瘡 (Mucous membrane pemphigoid)
- 扁平苔癬 (Lichen planus)
- 漿細胞牙齦炎 (Plasma cell gingivitis)

- 口乾 (Xerostomia)

- 修格蘭氏症 (Sjogren's syndrome)
- 藥物或放射線治療引起  
Medication or radiation related
- 藥物引起之顎骨壞死  
(MRONJ)
- 其他口腔炎

# General data

- Name: 陳 x 明
- Gender: male
- Age: 64 y/o
- Marital status: married
- Address: 台中市 (原縣區)
- First visit: 2007-12-21
- c/c: multiple ulcers >2 weeks





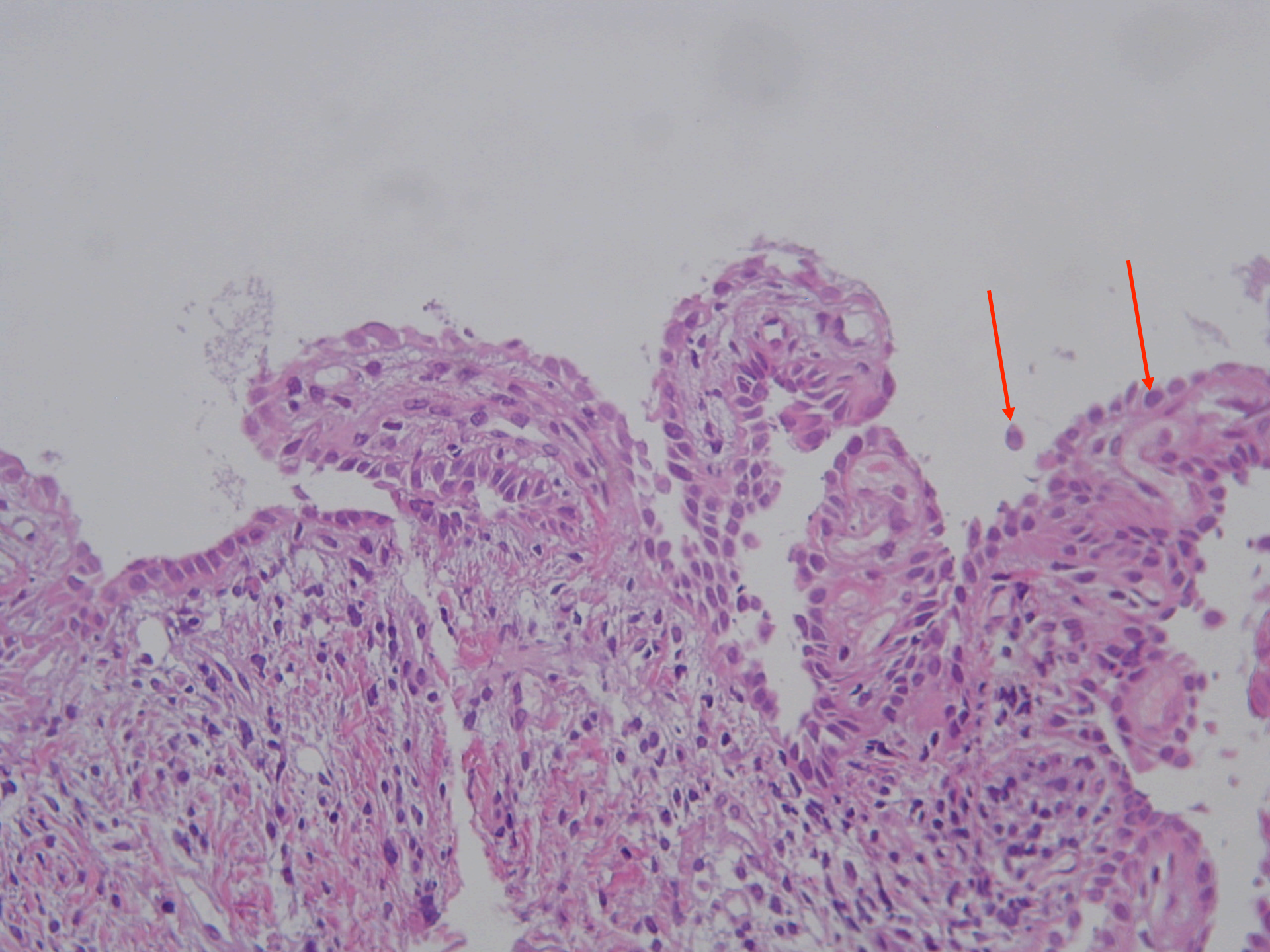






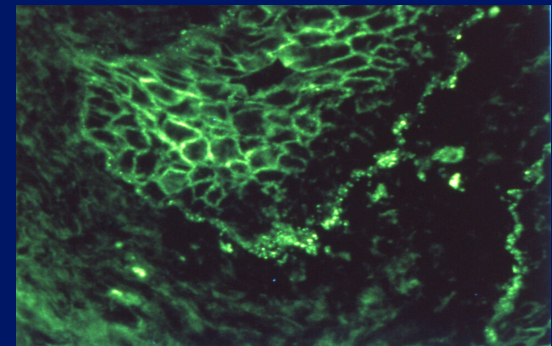
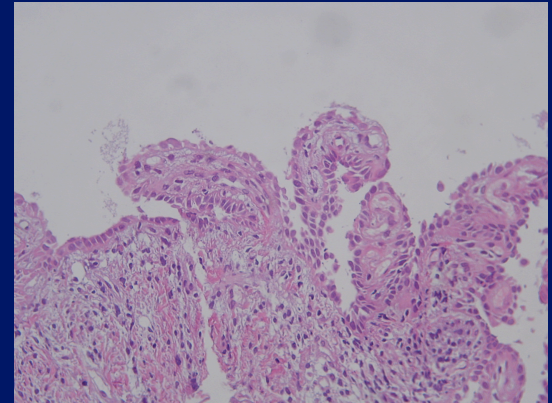




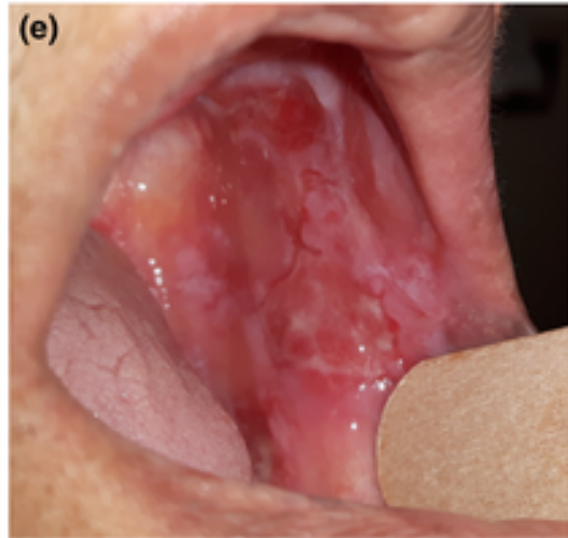
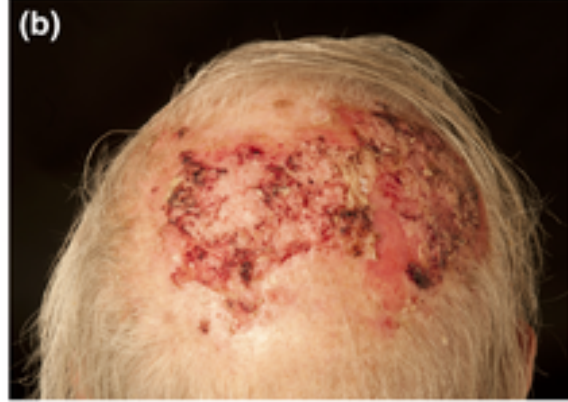


# Diagnosis

- Intraepithelial vesicle
- Immunofluorescence
  - Direct IF : (+) intercellular



Pemphigus vulgaris (天疱瘡)



# General data

- Name: 張 x 鳳
- Gender: female
- Age: 58 y/o
- Marital status: married
- Address: 台中市
- First visit: 2007-6-27
- c/c : painful mouth for several months

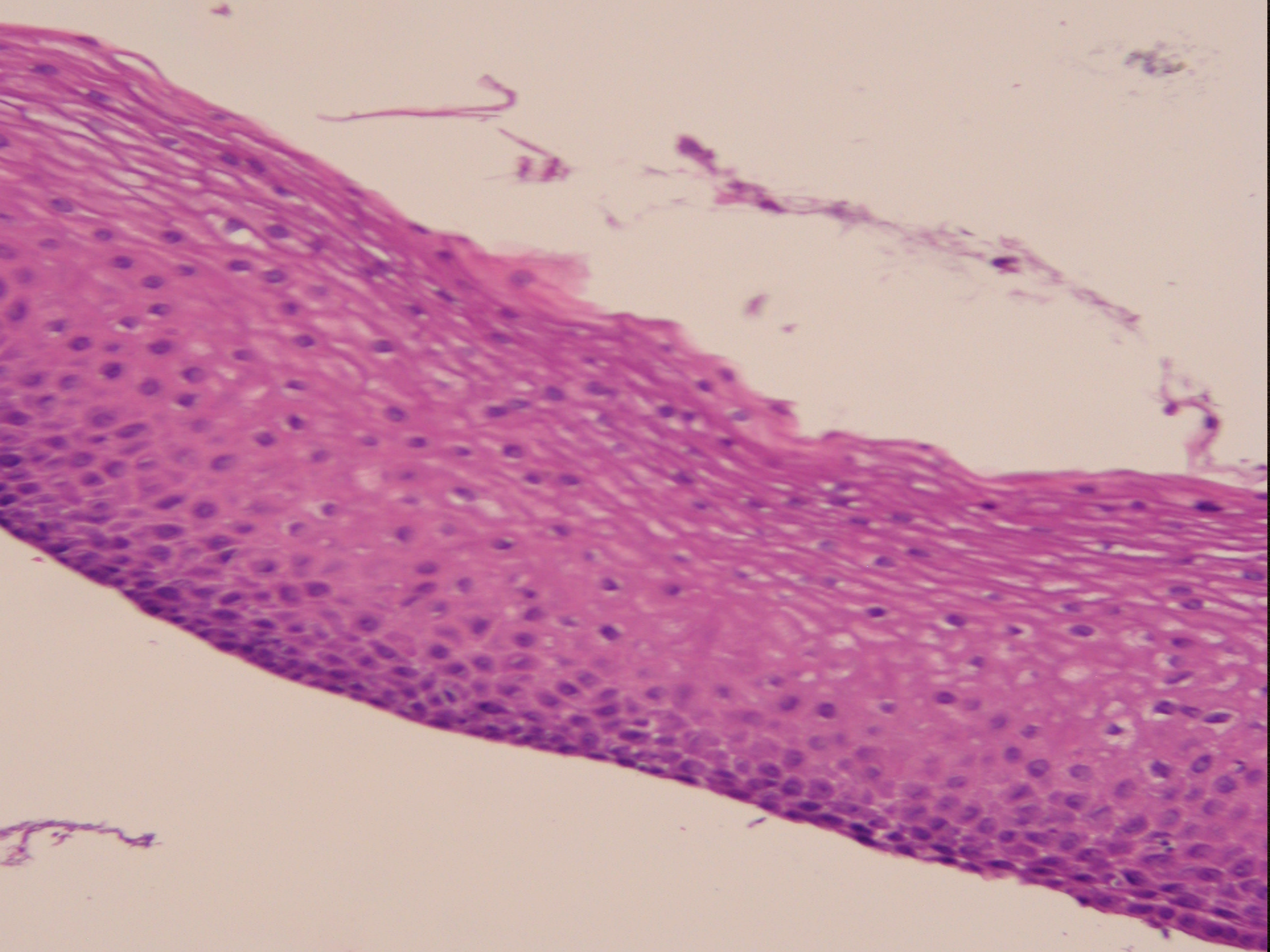






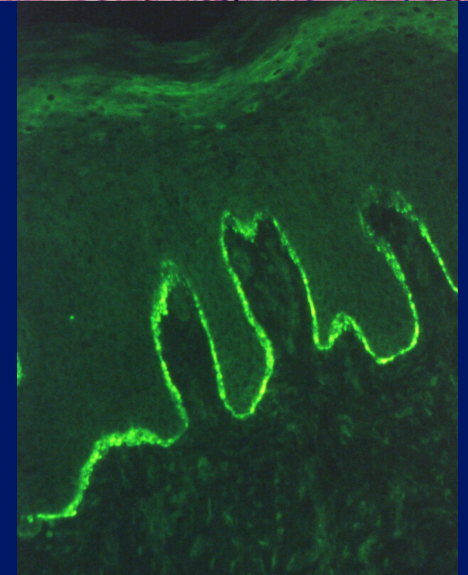
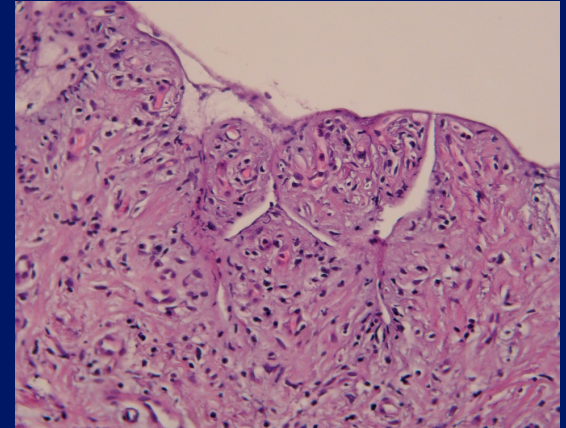






# Diagnosis

- Subepithelial vesicle
- Immunofluorescence
  - Direct IF : (+) basement membrane



Mucous membrane pemphigoid

(類天皰瘡)

# General Data

- Name: 許 x 江
- Gender: female
- Age: 62 y/o
- Marital status: married
- Address: 雲林縣
- First visit: 2009-3-30
- c/c : white lesions in the mouth, afraid of getting oral cancer













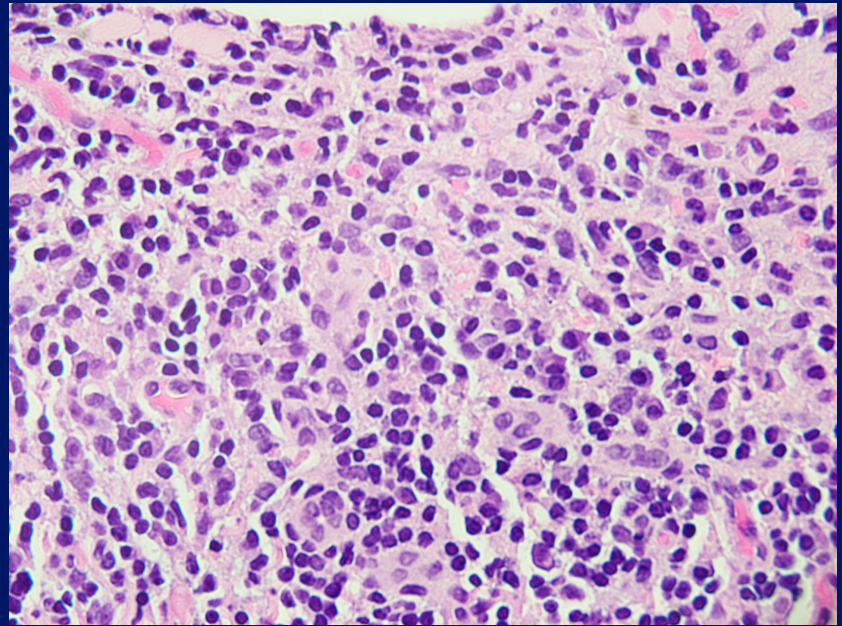
# Diagnosis

Lichen planus (扁平苔癬)

# Is Oral Lichen Planus Precancerous?

**No** Scientific evidence to prove  
it is a premalignant lesion

- 33 y/o female
- Painful and erythematous swelling gingiva
- Duration for about 1 year
- Bleeding at brushing



Plasma cell gingivitis

# General Data

- Name: 莊 x 雅
- Gender: female
- Age: 67 y/o
- Marital status: married
- Address: 台中市
- First visit: 2009-2-9
  
- c/c : painful mouth, severe dry mouth
- Shirmer's test : 0 mm/5 min
- ANA (+), 1280X





# Causes of Xerostomia

- **Developmental Origin**
  - salivary gland aplasia
- **Water/Metabolite loss**
  - impaired fluid intake
  - hemorrhage
  - Vomiting/diarrhea
- **Iatrogenic origin**
  - Medications
  - Radiation therapy to the head and neck
  - chemotherapy
- **Systemic diseases**
  - Sjogren's syndrome
  - Diabetes mellitus
  - Sarcoidosis
  - HIV infection
  - GVHD
  - Psychogenic disorders
- **Local factors**
  - Decreased mastication
  - Smoking
  - Mouth breathing





# Medications related xerostomia

- **Antihistamine agents** - Diphenhydramine, Chlorpheniramine
- **Decongestant agents** - pseudoephedrine
- **Antidepressant agents** - Amitriptyline, Citalopram, Fluoxetine, Paroxetine, Sertraline, Bupropion
- **Antipsychotic agents** - Phenothiazine derivatives, Haloperidol
- **Sedatives and anxiolytic agents** - Diazepam, Lorazepam, Alprazolam
- **Antihypertensive agents** - Reserpine, Methyldopa, Chlorothiazide, Furosemide, Metoprolol, Calcium channel blockers
- **Anticholinergic agents** - Atropine, Scopolamine

# Therapeutic Approaches

- Symptomatic treatment typically includes :
  - increase existing salivation
    - Evoxac, Salagen
  - replace lost secretions : water
  - control of dental caries
  - specific measures such as treatment of infections.

- 58 y/o male
- Prostate Ca
- Injection of Zometa, monthly for years
- Alveolar bone exposure
- Abscess formation



- Medication-related osteonecrosis of the jaw (MRONJ)

# 其他口腔炎



# 患者的口腔問題

口乾

口臭

黏膜  
破損

口腔炎

嘴破

牙齦炎

蛀牙



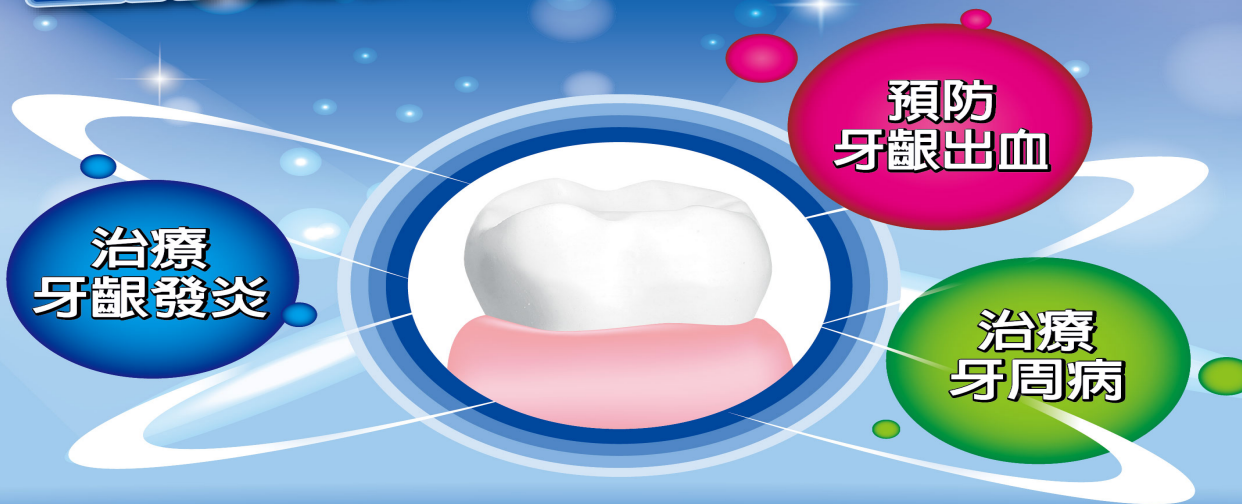


台灣首支藥品牙齦膏

衛部藥製字第058073號

# 齒博士牙齦膏

*Enoxolone* *Gingival paste*



預防兼具治療 天天刷日日防護最周到

## 緩解牙齦紅腫、牙齦發炎。

衛部藥製字第058073號

齒博士牙齦膏  
*Enoxolone*





- 緩解牙齦紅腫、牙齦發炎。
- 對於齒齦疾病期間的消腫、抗發炎具有緩解的效果

# Enoxolone(次甘草酸)

- Product of plant *Glycyrrhiza glabra* (licorice) (甘草)
- Inhibits the metabolism of prostaglandins
- 甘草的乾燥根及地下根狀莖
  - 滋潤緩和，中和烈藥
  - 解毒、鎮痛、解痙、矯味、鎮咳祛痰
  - 慢性咽喉炎的輔助治療



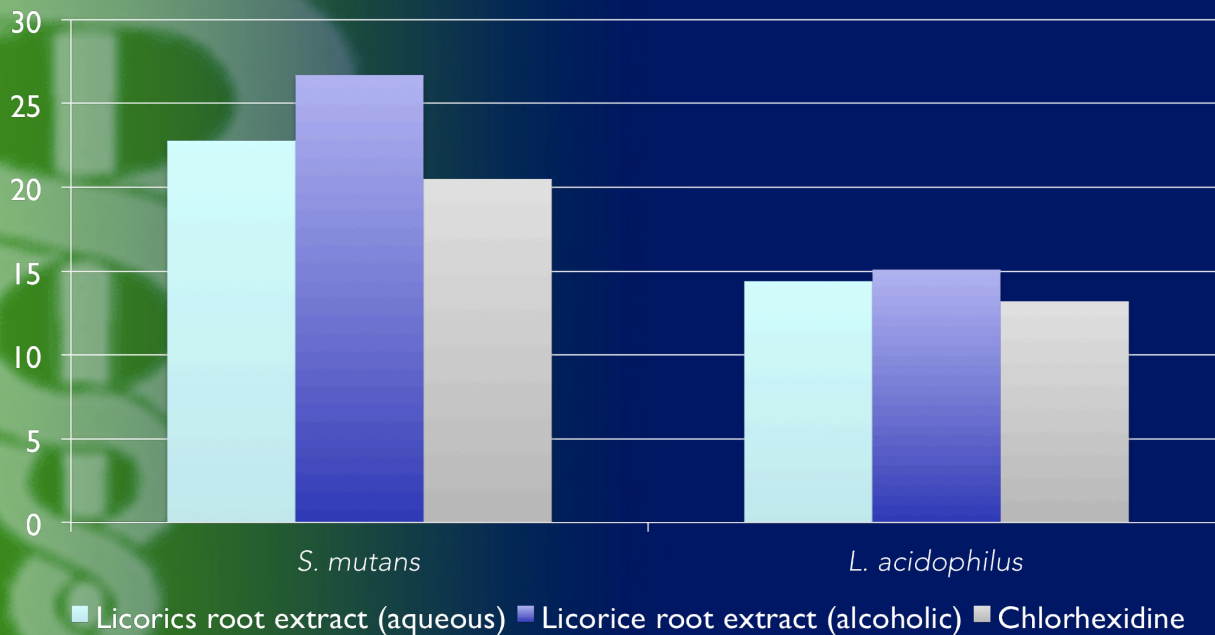
# Effects of Glycyrrhiza sp. and its active components in some inflammatory models

Component	Model	Study	Mechanism
<i>Glycyrrhiza glabra</i> (glabridin, isoliquiritigenin)	LPS	J774A.1 murine macrophages	Inhibited production of NO, IL-1 $\beta$ , and IL-6 (Thiyagarajan <i>et al.</i> , 2011)
<i>Glycyrrhiza radix</i>	LPS	Mouse peritoneal macrophages	Regulated activation of NF- $\kappa$ B and caspase-1 (Kim <i>et al.</i> , 2014)
<i>Glycyrrhiza uralensis</i>	LPS	RAW 264.7 cells	Activated Nrf2 that inhibited NF- $\kappa$ B-mediated inflammatory pathways (Wu <i>et al.</i> , 2011)
Glycyrrhizin	CpG-DNA stimulation, LPS	RAW 264.7 cells	Suppressed inflammatory responses, impaired internalization of TLR4, activated NF- $\kappa$ B, and MAPKs (Schröfelbauer <i>et al.</i> , 2009)
	LPS	RAW 264.7 cells	Suppressed NO production and iNOS expression (Uto <i>et al.</i> , 2012)
Glycyrrhizic acid, 18 $\beta$ -glycyrrhetic acid	LPS	RAW 264.7 cells	Inhibited the production of NO, PGE <sub>2</sub> , TNF- $\alpha$ , IL-6, IL-1 $\beta$ , and ROS, reduced the expression of iNOS and COX-2 genes, blocked activation of transcription factors such as NF- $\kappa$ B and PI3K p110 $\delta$ and p110 $\gamma$ (Wang <i>et al.</i> , 2011)
18 $\beta$ -glycyrrhetic acid	LPS	RAW 264.7 cells	Inhibited RANKL-stimulated osteoclastogenesis and phosphorylation of NF- $\kappa$ B p105, inhibited cytokine production (Sasaki <i>et al.</i> , 2010)
	Periodontitis by oral infection	IL-10-deficient mice	Inhibited the induction and progression of infection-induced alveolar bone loss (Sasaki <i>et al.</i> , 2010)
Licorice, roasted licorice	TPA and collagen-induced arthritis	Mice	Reduced clinical arthritis score, paw swelling, and histopathological changes (Kim <i>et al.</i> , 2010a)

Glycyrrhizin at a concentration of 100 $\mu$ g/mL could inhibit PGE<sub>2</sub> production (Ohuchi *et al.*, 1981).

# Effects of aqueous and Alcoholic Licorice Root Extract Against Streptococcus Mutans and Lactobacillus Acidophilus in Comparison to Chlorhexidine: An In Vitro Study

- S. mutans are known to be highly associated with caries in humans.
- Studies shown mechanical removal is difficult to eliminate S. mutans from pits, fissures, and proximal surfaces.



此研究報告指出 Enoxolone 抑菌效果優於一般漱口水成份 (Chlorhexidine)，並且不影響口腔內益生菌種 Lactobacillus Acidophilus (嗜乳酸桿菌)。

# Effects of Toothpaste Containing Natural Medicines on Periodontal Disease

Comparison of plaque index(牙菌斑指數) between control and herbal extracts

	<b>Baseline</b>	<b>2 weeks</b>	<b>4 weeks</b>
Control(一般牙膏)	1.94±0.12	1.36±0.29*	1.25±0.21*
Herbal extracts (Enoxolone)	2.00±0.16	<b>1.12±0.16*+</b>	<b>0.95±0.14*#+</b>

Comparison of bleeding index(牙齦出血指數) between control and herbal extracts

	<b>Baseline</b>	<b>2 weeks</b>	<b>4 weeks</b>
Control(一般牙膏)	0.81±0.34	0.53±0.28*	0.36±0.32*
Herbal extracts (Enoxolone)	0.85±0.37	<b>0.30±0.20*+</b>	<b>0.13±0.15*#+</b>

本項研究認為含有甘草次酸成分的齒博士牙齦膏在預防與治療牙周疾病的療效較好

8  
3  
3

# The influence of glycyrrhetic acid (enoxolone) toothpaste on periodontal treatment outcomes and salivary levels of IL-8, TNF- $\alpha$ , IL-17, MCP-1 and VEGF in patients with chronic periodontitis

Wpływ pasty do zębów zawierającej kwas glicyretynowy (enoksolon) na efekty leczenia przyzębia oraz poziom IL-8, TNF- $\alpha$ , IL-17, MCP-1 i VEGF w ślinie u pacjentów z przewlekłym zapaleniem przyzębia

Tomasz Kaczyński<sup>1</sup><sup>A B C D E</sup>, Andrzej Miskiewicz<sup>1</sup><sup>A B C D</sup>, Bartłomiej Górski<sup>1</sup><sup>A D</sup>,  
Marek Radkowski<sup>2</sup><sup>A B</sup>, Damian Strzemecki<sup>3,4</sup><sup>A B</sup>, Tomasz Kryczka<sup>3,4</sup><sup>A B</sup>,  
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<sup>1</sup>Department of Periodontology and Oral Diseases, Medical University of Warsaw, Warsaw, Poland

<sup>2</sup>Department of Immunopathology of Infectious and Parasitic Diseases, Medical University of Warsaw, Warsaw, Poland

# 「Glycyrrhetic acid 甘草次酸」在2017-2019年有137篇分別研究在癌症用藥載體，化放療副作用減少。

- 18β-Glycyrrhetic acid mitigates radiation-induced skin damage via NADPH oxidase/ROS/p38MAPK and NF-κB pathways.  
出處：Environmental Toxicology and Pharmacology . 2018 Jun.
- 18β-Glycyrrhetic acid : its core biological properties and dermatological applications.  
出處：Int J Cosmet Sci.2019 Jun
- 18β-Glycyrrhetic acid protects against naphthylisothiocyanate-induced cholestasis through activation of the Sirt1/FXR signaling pathway.  
出處：Acta Pharmacol Sin.2018
- Licorice preparation improve efficiency of chemotherapy and surgical treatment of transplanted tumors.  
出處：Bull Exp Biol Med.2008
- 18β-Glycyrrhetic acid inhibits migration and invasion of human gastric cancer cells via the ROS/PKC-α/ERK pathway. 出處：J Nat Med. 2018 Jan.
- In vitro antibacterial effects of glycyrrhetic acid on periodontopathogenic and capnophilic bacteria isolated from adult periodontitis  
出處：M. H. Salari and Z. Kadkhoda Clin Micro Infec 2003;9(9):987-988
- Anti-inflammatory effect of enoxolone in an ex-vivo human gingival mucosa model  
出處：S. Boisnic et al. Rev Stomatol Chir Maxillofac 2010;111(2):69-73

# 『齒博士』是市面上唯一經衛福部核准的藥品牙齦膏

項目 / 品名	齒博士牙齦膏	牙○適 牙齦護理牙膏	舒○定 牙齦護理	高○潔 牙齦護理專家	黑○ 專業護齦牙膏
分類	藥品 (指示用藥)	非藥品	非藥品	非藥品	非藥品
主要成分	<b>Enoxolone 1%</b>	碳酸氫鈉, 草本精華等	硝酸鉀, 檸檬酸鋅, 氟化鈉	三氯羥二酚醚, 水溶性 高分子, 氟化鈉, 香料, 表面活性劑	單氟磷酸鈉, Biogum (檸檬酸鋅, PVM/MA共 聚物)
適應症	第一次使用前須先經過 牙科醫師診斷. 緩解牙 齦紅腫, 牙齦發炎. 對於 齒齦疾病期間的消腫, 抗發炎具有緩解效果	無	無	無	無
管理單位	<b>衛福部</b>	<b>經濟部工業局</b>			
產地	台灣	泰國	泰國	泰國	大陸



# ADA(美國牙科協會)認定RDA值 $\leq 30$ 為不磨耗的牙膏

## ※ 牙膏磨耗性測試方法

### A · 輻射性牙本質磨損值法 (RDA)

### B · 表面輪廓法

- ◆ 標準參比磨耗物：氧化矽或焦磷酸鈣
- ◆ 標準參比稀釋液：CMC(甲基纖維素)
- ◆ 標準參比磨耗膏泥：Soda粉(RDA值7)

資料來源：經濟部標準檢驗局

<b>RDA</b> 齒質磨耗不得超過	<b>A方法標準參比膏泥磨耗值2.5 倍</b>
	<b>B方法標準參比膏泥磨耗值2.0 倍</b>
<b>REA</b> 琺瑯質磨耗不得超過	<b>A方法標準參比膏泥磨耗值4 .0倍</b>
	<b>B方法標準參比膏泥磨耗值4.5 倍</b>

# RDA 200 recommended limit FDA

RDA	Dentifrice brand and variety
7	straight baking soda(齒博士牙齦膏)
8	Arm & Hammer Tooth Powder
70	Colgate Total(高X潔)
79	Sensodyne(舒X定)
83	Colgate Sensitive Maximum Strength
95	Crest Regular (possibly 99)
104	Sensodyne Extra Whitening
110	Colgate Herbal
110	Amway Glister (given as upper bound) (安X)
113	Aquafresh Whitening

RDA=30 : 磨損值最小

RDA>100 : 高度磨蝕

70<RDA<100 : 磨損值中等

150<RDA<250 : 危險，並被視為對牙齒有危害的最高限度。

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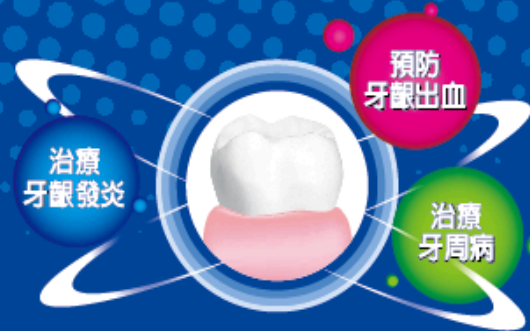
資料來源：經濟部標準檢驗局

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	B方法標準參比膏泥磨耗值2.0 倍
REA 琺瑯質磨耗不得超過	A方法標準參比膏泥磨耗值4 .0倍
	B方法標準參比膏泥磨耗值4.5 倍

『齒博士牙齦膏』主要賦形成份即是氧化矽及甲基纖維素；故本品磨耗值RDA 7 等同標準參考值。

# 齒博士牙齦膏

## Enoxolone *Gingival paste*



### 口腔護理使用方法

#### 1. 如同刷牙方式



\* 居家護理保健口腔衛生：  
每日2-3次，使用「牙齦膏」  
刷牙(如同牙膏使用方式)。

#### 2. 塗抹方式



\* 牙齦發炎、紅腫等口腔症狀  
問題者，可塗抹患部，待  
3-5分鐘後漱口。

當有任何口腔問題請諮詢您的主治醫師，以免延誤病情。

# 口乾或腫瘤病人口腔黏膜傷口處置



- 步驟一**
1. 取約1cm的牙齦膏
  2. 準備10cc的冷開水



- 步驟二**
1. 攪拌溶於水



- 步驟三**
1. 可使用針筒吸取
  2. 或直接就口喝入。



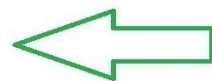
- 步驟四**
1. 可使用針筒注入口內或直接喝。
  2. 於口腔內停留2分鐘漱口或吞服。

# 齒博士牙齦膏 使用族群：

高危險群	
- 癌症患者	打骨針，骨鬆患者、減少顎骨壞死
- 化療放療者	口乾、黏膜修復、減少口腔潰瘍
- 糖尿病患	紅腫、出血、口臭、嘴破。
- 移植病患	抗排斥藥物引起副作用牙齦紅腫。
- AIDS患者	藥物引起副作用牙齦紅腫出血。
- COPD患者	長時間使用類固醇,導致口腔念珠菌感染(鵝口瘡)。
平常人	預防牙周病、牙齦萎縮、牙口健康。

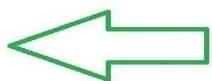


清潔



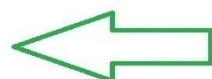
牙膏

口乾



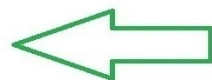
Biotene 漱口水

黏膜潰瘍



口內膏

殺菌抑菌



寶馬生

牙齦萎縮



牙齦手術

顎骨壞死



手術

一支搞定 牙口健康！

A meme featuring Will Smith as Agent K from the movie Men in Black II. He is wearing his signature dark sunglasses and a dark suit with a white shirt and tie. He is holding a glowing blue flashlight in his right hand, which is pointed towards the camera. The background is dark and blurry, suggesting an outdoor night setting. The text "DONE" is overlaid at the top, and "Thank you for your attention" is overlaid at the bottom.

**DONE**

**Thank you for your attention**