實習醫師病例報告

報告者：Intern L組 呂維仁、趙珮吟、劉冠宏、劉芳如、楊超捷

指導者：王文岑醫師暨口腔病理科全體醫師

97.04.15
Name: 王x平
Gender: male
Age: 46
Native: 高雄市
Marital Status: 已婚
Occupation: 自由業
Attending V.S.: 王文岑
First visit: 93.07.12
Chief Complaints

🐾 White patches over left buccal mucosa and both lips about 2 months
Present Illness

White patches over L’ t buccal mucosa and both lips since 2 months ago.

Painless

Removable but appeared soon
Past History

Personal Medical History:
- Denied any systemic disease
- Denied any drug or food allergy

Personal Dental History:
- OD
- Extraction
- Prosthesis
- Attitude toward dental treatment: cooperative
Personal Habits

Risk factors related to malignancy:

- Alcohol: ( - )
- Betel nuts: (+) 3y/ 1package/ day, quitted
- Cigarette: (+) 20 years/ 1 package/ day

Other special habits:

- Denied
Oral Examination

- Creamy-white patches covered whole L’t t BM and posterior R’t t BM
- Removable by scraping
White patches covered palate extending from hard palate to soft palate, measuring approximately 5cm x 3cm. The patches could be removed by scraping it and the surface covered by the white patches was reddish.

Upper dentition:

malocclusion
White plaques covered the dorsal tongue ranging along the lateral border. The plaques could be removed by scraping it, too.
White patches covered the lower lip extending from the L’t mouth angle to the middle. The patches could be removed.

Several small vesicles with some crusts around the L’t mouth angle.

Gingival inflammation and cervical abrasion.
**Physical Examination**

- Pain: • (-)
- Swelling: • (-)
- Bleeding tendency: • (-)
- Induration: • (-)
- Fever or local heat: • (-)
- Lymphadenopathy: • (-)

**Radiography Examination**

Nil
**Summary of Clinical Features**

- Removable white patches covered whole buccal mucosa, palate, and tongue, asymptomatic.

- Small vesicles with some crusts around the L’t mouth angle.
Separated white patches
Reddish(+) after scraping it
Small vesicles

Fever (-)
Edema (-)
Local heat (-)
Pain(-)
Pus discharge (-)

White lesions and/or combined oral infection were suspected
Working Diagnosis of the White Lesion

- Lichen Planus
- Leukoplakia
- Pseudomembranous candidiasis
<table>
<thead>
<tr>
<th></th>
<th>Lichen planus (reticular form)</th>
<th>Our case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site</strong></td>
<td>Buccal mucosa, tongue, palate, gingival, lip</td>
<td>Buccal mucosa, tongue, palate</td>
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<tr>
<td><strong>Age</strong></td>
<td>middle age</td>
<td>46</td>
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<tr>
<td><strong>Gender</strong></td>
<td>♀</td>
<td>♂</td>
</tr>
<tr>
<td><strong>Frequency</strong></td>
<td>0.1%~2.2%</td>
<td>Unknown</td>
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<tr>
<td><strong>Appearance</strong></td>
<td>Lace-like network of white lines (Wickham’s striae)</td>
<td>Creamy-white patches</td>
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<tr>
<td><strong>Symptom</strong></td>
<td>Asymptomatic</td>
<td>Asymptomatic</td>
</tr>
<tr>
<td><strong>Other clinical feature</strong></td>
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<td>Removable</td>
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Our Case

Lichen Planus
<table>
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<tr>
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<tr>
<td><strong>Appearance</strong></td>
<td>White</td>
<td>Creamy-white patches</td>
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<tr>
<td><strong>Mucosal surface</strong></td>
<td>White</td>
<td>Reddish</td>
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<tr>
<td><strong>Symptom</strong></td>
<td>Asymptomatic</td>
<td>Asymptomatic</td>
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<tr>
<td><strong>Other clinical feature</strong></td>
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<td>Removable</td>
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<tr>
<td></td>
<td>Pseudomembrane candidiasis</td>
<td>Our case</td>
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<tr>
<td><strong>Site</strong></td>
<td>Buccal mucosa, dorsal tongue, palate</td>
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<td><strong>Age</strong></td>
<td>&gt; 40</td>
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<td><strong>Gender</strong></td>
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<td>🡱</td>
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<td><strong>Frequency</strong></td>
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<td><strong>Appearance</strong></td>
<td>Creamy-white to yellow plaques</td>
<td>Creamy-white patches</td>
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<td><strong>Mucosal surface</strong></td>
<td>Reddish</td>
<td>Reddish</td>
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<tr>
<td><strong>Symptom</strong></td>
<td>Asymptomatic or foul taste, burning mouth sensation</td>
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<tr>
<td><strong>Other clinical feature</strong></td>
<td>Removable ⭐️</td>
<td>Removable ⭐️</td>
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Pseudomembrane candidiasis

Our Case

Pseudomembrane candidiasis

Our Case
Candidiasis, buccal, tongue, palate, smear cytology
**Clinical Impression**

- Oral candidiasis over BM, palate, tongue
- Herpes simplex virus infection over L't mouth angle
- Underline disease?
<table>
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<th>Pathogenesis</th>
<th>Our case</th>
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<tr>
<td><strong>Drugs/Medications:</strong> multiple antibiotic, corticosteroids...</td>
<td>No medications</td>
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<tr>
<td><strong>Endocrinopathies:</strong> DM, Hypoadrenalism, Hypothyroidism...</td>
<td>No history — examination</td>
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<td><strong>Hematologic Disorders:</strong> Lymphoma, Leukemia...</td>
<td>No history — examination</td>
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<tr>
<td><strong>Immunodeficiency:</strong> HIV, Thymic alymphoplasia...</td>
<td>No history — examination</td>
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<tr>
<td><strong>Leukocyte Disorders:</strong> Myeloperoxidase deficiency...</td>
<td>No history — examination</td>
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<tr>
<td>Pathogenesis</td>
<td>Our case</td>
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<td>-----------------------------------</td>
<td>-----------------------------------------------</td>
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<td>Malignancy: Leukemia, Thymoma…</td>
<td>No history</td>
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<tr>
<td>Nutritional Deficiencies: Iron deficiency, Vitamin B deficiency…</td>
<td>Balanced taking food</td>
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<td>Other: Radiation therapy, xerostomia, old age, denture use…</td>
<td>No radiation therapy; Middle age; No denture</td>
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</table>

R/O other pathogenesis

Doubt of candidiasis with other disorders

Arrange patient to Lab survey
Antifungal treatment
Further Lab survey to R/O possibility of other disorders or infections
Treatment Course

First Visit (Tx 1)

OE
- Multiple removable white patches over whole oral cavity, including mouth floor

Imp
- Candidiasis of mouth
- Herpes simplex infection L’t mouth angle

Tx
- Take smear slides for buccal, palate and tongue dorsal ➞ Rx: Diflucant
- Lab survey
  - CBC-I; Herpes simplex virus serol
  - HIV 1+2 (ELISA)
  - TP; Bil; GOT; GPT; Alk-p; UN; CRTN; GGT
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<th>unit</th>
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<td>WBC</td>
<td>8.00</td>
<td>4.0–10.0</td>
<td>X1000/ul</td>
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<tr>
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<td>4.84</td>
<td>4.5–6.0</td>
<td>X10^6/ul</td>
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<td>g/dl</td>
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<td>40–53</td>
<td>%</td>
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<td>93.4</td>
<td>79.0–101.0</td>
<td>fl</td>
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<td>30.4</td>
<td>26.0–35.0</td>
<td>pg</td>
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<td>g/dl</td>
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<td>130.0–500.0</td>
<td>X1000/ul</td>
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<td>11.5–14.5</td>
<td>%</td>
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<td>RDW–SD</td>
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<td>36.0–46.0</td>
<td>fl</td>
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<td>Protein</td>
<td>7.37</td>
<td>6.0–8.3</td>
<td>gm/dl</td>
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<tr>
<td>Albumin</td>
<td>3.68</td>
<td>3.5–5.0</td>
<td>gm/dl</td>
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<tr>
<td>A/G</td>
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<td>1.50–2.01</td>
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<td>Bil(Total)</td>
<td>0.50</td>
<td>0.2–1.0</td>
<td>mg/dl</td>
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<td>Bil(Direct)</td>
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<td>Bil(Ind.)</td>
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<td>mg/dl</td>
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<td>10–42</td>
<td>IU/L</td>
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<tr>
<td>GPT(ALT)</td>
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<td>10–40</td>
<td>IU/L</td>
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<td>84</td>
<td>32–92</td>
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<tr>
<td>UN</td>
<td>15.9</td>
<td>7.0–18.0</td>
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<tr>
<td>Creatinine</td>
<td>0.86</td>
<td>0.6–1.3</td>
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<tr>
<td>GGT</td>
<td>52</td>
<td>7–64</td>
<td>IU/L</td>
</tr>
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</table>
Lab data
Herpes simplex virus $< 1:4 \Rightarrow$ Negative
(positive $\geq 1:4$)

ELISA of HIV:
Positive
• Multiple removable white patches disappeared 2 days after last visit post medication

• Oral candidiasis, suspect HIV infection

• Western blot test
  • Anti HIV-I
  • Anti HIV-II
White patches disappeared

Final Impression

• Oral candidiasis
• Human immunodeficiency virus (HIV) infection

Tx

• Referred p’t to Infection Dept.
**Treatment Courses (Infection Dept)**

**Tx1 < 93-08-11 > HIV Tx**

**Rx:**
- Diflucan (50mg) 2# QD x 21days

**Examination:**
- CBC, Chest X-ray (CXR), Urine test

**Tx2~ < 93-09-01 >**

- **Anti-HCV:** (+)
- **VL:** 146000 copies/ml (>50 copies/ml)
- **CD4:** 157 (<200)
- **HBsAG:** (-)
- **STS:** (-)

**CXR:** Consider pneumonia in ant. segment of right upper lobe

**Rx:**
- Diflucan (50mg) 2# QD x 7days
- Combivir 1# BID x 7days
- Kaletra 3# BID x 7days

**Examination:**
- CXR, CBC

**Start HAART**
## Treatment Courses (Infection Dept) (cont~)

### Tx3~4 < 93-09-08 > ~ < 93-09-15 > 1st month of HAART

<table>
<thead>
<tr>
<th>BW (48-50 kg)</th>
<th>E.S.R: 31 mm/h (&gt;10 mm/h)</th>
<th>CRP: 5.26 ug/ml (&gt;5 ug/ml)</th>
<th>CXR: Interval revolution of bronchopneumonia at ant. segment of right upper lobe (compared with 8/12)</th>
<th>Abd. echo report (on 9/13): Hepatic nodule (0.82cm)</th>
</tr>
</thead>
</table>

### Rx:
- **Diflucan (50mg)**: 2# QD x 7days x 28days
- **Combivir**: 1# BID x 7days x 28days
- **Viracept (250mg)**: 5# BID x 7days x 28days
### Treatment Courses (Infection Dept) (cont~)

#### 2nd month of HAART

<table>
<thead>
<tr>
<th>O</th>
<th>• Aggravated diarrhea, palpitation, anxiety, suicidal idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tx</td>
<td>• Suggest combivir plus viramune, and continue diflucan</td>
</tr>
<tr>
<td>Rx</td>
<td>• Diflucan (50mg) 2# QD x 14days</td>
</tr>
<tr>
<td></td>
<td>• Xanax(0.25mg) 1# TID x 28days</td>
</tr>
<tr>
<td></td>
<td>• Combivir 1# BID x 14days</td>
</tr>
<tr>
<td></td>
<td>• Viramune(200mg) 1# BID x 14days</td>
</tr>
</tbody>
</table>

#### 3rd month of HAART

| O       | • Aggravated diarrhea, palpitation, anxiety improved    |
Treatment Courses (Infection Dept) (cont~)

Tx8~9 < 93-12-22 > ~ < 93-12-27 >4th month of HAART

- No diarrhea, no palpitation after switching to combivir plus
- Viramune, mild nausea sensation, headache no rash

Examination (93-12-22)

CBC: WNL

VL <50 copies/ml

CD4 : 417

Back to normal range
**Treatment Courses (Infection Dept)**

**Tx 10~15 < 94-04-13 > ~ < 95-04-19 > 8th~20th month of HAART**

**O**
- Skin itching, eczema, suicide idea

**Rx**
- Ichderm Cream (15gm) 1# BID x 28 days
- ClariTYNE (10mg) 1# QD x 28 days
- Esperson (5gm) 1# BID x 7 days

**Examination (94-07-13)**
- CBC, CXR, Abd. Echo
- VL < 50 copies/ml
- CD4: 220
- Abd. Echo: Hepatic nodule (0.6 cm)

**Examination (95-01-15)**
- CBC, CXR, AFP
- VL < 50 copies/ml
- CD4: 307
- AFP: 5.3 ng/ml (< 20 ng/ml)
Tx16 < 96-03-21 > Lost f/u for about 1 year since 95/04/19
(於95年7月底自行停藥)

- Skin papules, carbuncle, insomnia, P’t refused psychiatric Tx

- Elomet Cream(5gm)  1 tube BID x 7days
- Fusotex(5gm)            1# BID x 7days
- Estazolam(2mg)        1# QD x 28days
- Xanax(0.25mg)          1# TID x 28days
- Viramune(200mg)      1# BID x 28days
- Combivir            1# BID x 28days

Examination

- CBC, CXR, Abd. Echo, AFP
- VL=2450 copies/ml
- CD4:70
- AFP : 6.9 ng/ml ( < 20 ng/ml)
<table>
<thead>
<tr>
<th>Tx17 &lt; 96-04-04 &gt; Continue HAART</th>
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<tbody>
<tr>
<td>O</td>
</tr>
<tr>
<td>• Carbuncle and insomnia improve</td>
</tr>
<tr>
<td>Rx</td>
</tr>
<tr>
<td>• Ditto</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Tx18~20 &lt; 96-05-02 &gt; ~ &lt; 96-06-29 &gt; Continue HAART</th>
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<tbody>
<tr>
<td>O</td>
</tr>
<tr>
<td>• Occupation improve, skin papules, carbuncle</td>
</tr>
<tr>
<td>Rx</td>
</tr>
<tr>
<td>• Cloxacillin(250mg) 2# QID x 14days</td>
</tr>
<tr>
<td>• Septon(5gm) 1# BID x 30days</td>
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<tr>
<td>• Fusotex(5gm) 1# TID x 7days</td>
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</tbody>
</table>

Examination(96-06-29)

- CBC, CXR, Abd. Echo, AFP
- VL<50 copies/ml
- CD4:177
- AFP : 6.9 ng/ml (< 20 ng/ml)
Treatment Courses (Infection Dept) (cont~)

Tx21~25 < 96-07-27 > ~ < 97-02-15 > Continue HAART

Examination(96-10-19)

- Skin lesion improve, carbuncle recover, muscle cramping,
- Eye itching

O

Rx

- Ditto

CBC: WNL
VL<50 copies/ml
CD4:285
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<th>93/8/11</th>
<th>94/7/13</th>
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<td>62</td>
<td>55</td>
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<td>Creatinie</td>
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<td>0.99</td>
<td>1.02</td>
<td>1.1</td>
<td>0.9</td>
<td>0.93</td>
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<td>Sugar</td>
<td>80</td>
<td>83</td>
<td>84</td>
<td>84</td>
<td>93</td>
<td>98</td>
</tr>
<tr>
<td>TC/HDL</td>
<td>2.2</td>
<td></td>
<td>4</td>
<td>2.5</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>LDL/HDL</td>
<td>1</td>
<td></td>
<td>1.9</td>
<td>1</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Date</td>
<td>CD4 (27-51%)</td>
<td>CD8 (14-44%)</td>
<td>CD4:CD8 Ratio</td>
<td>HIV-VL</td>
<td>Total T-Cell</td>
<td>Active T-Cell</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------------</td>
<td>--------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td>93/8/11</td>
<td>9.36%</td>
<td>80.86%</td>
<td>0.12</td>
<td>146000</td>
<td>89.52%</td>
<td>67.39%</td>
</tr>
<tr>
<td>93/12/22</td>
<td>11.45%</td>
<td>76.54%</td>
<td>0.15</td>
<td>&lt;50</td>
<td>88.69%</td>
<td>43.64%</td>
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<tr>
<td>94/7/13</td>
<td>15.37%</td>
<td>71.69%</td>
<td>0.21</td>
<td>&lt;50</td>
<td>85.95%</td>
<td>43.60%</td>
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<tr>
<td>95/4/19</td>
<td>22.24%</td>
<td>68.66%</td>
<td>0.32</td>
<td>&lt;50</td>
<td>84.54%</td>
<td>41.31%</td>
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<tr>
<td>96/3/21</td>
<td>8.41%</td>
<td>70.62%</td>
<td>0.12</td>
<td>2450</td>
<td>81%</td>
<td>42.32%</td>
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<tr>
<td>96/6/29</td>
<td>12.70%</td>
<td>78.60%</td>
<td>0.16</td>
<td>&lt;50</td>
<td>88.80%</td>
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<tr>
<td>96/11/16</td>
<td>16.10%</td>
<td>73.90%</td>
<td>0.22</td>
<td>&lt;50</td>
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</table>
Another Two Cases:

Case II (96-10-01)

A 46 y/o male complained of pain at lateral tongue, lips and palate for 2 years.

Smoking, betel nut chewing, alcohol consumption for 20~25 years.

Denied heart disease, arrhythmia, TB, Thyroid disease, sex transmitted diseases, drug allergy....et al.

Herpes zoster over right back in one year
Case I (cont~)

• Removable white patches over bilateral BM, upper lip, and tongue dorsum.

Oral Examination

Smear cytology: **Oral candidiasis** over lateral tongue, lips and palate

Lab survey: **HIV infection**

Refer to Infection Department for further treatment on 96-10-17
Another Two Cases:
Case III (96-11-05)

A 31 male comes with multiple white spots over full mouth for 2 months.

Denied any habits and any systemic diseases.

A syphilis history was found from his previous medical records.

BUT!!!
Case II (cont~)

Oral Examination

- Removable white patches over bilateral BM, palate, and tongue dorsum.
- Cough, pneumonia for 2 months

Smear cytology: Oral candidiasis over BM, palate and tongue

Homosexual and one-night stand experience was told in the later treatment courses

Refer to Infection Department for further treatment on 96-11-22
<table>
<thead>
<tr>
<th>Test</th>
<th>Our Case</th>
<th>Case I</th>
<th>Case II</th>
<th>Normal range</th>
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<tbody>
<tr>
<td><strong>WBC</strong></td>
<td>8</td>
<td>3.28</td>
<td>2.39</td>
<td>4.0-10.0 x1000/ul</td>
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<tr>
<td><strong>RBC</strong></td>
<td>4.84</td>
<td>4.79</td>
<td>3.6</td>
<td>4.5-6.0 x10*6/ul</td>
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<tr>
<td><strong>Hgb</strong></td>
<td>14.7</td>
<td>13.6</td>
<td>10.6</td>
<td>13-17 g/dl</td>
</tr>
<tr>
<td><strong>Hct</strong></td>
<td>45.2</td>
<td>41.8</td>
<td>31.5</td>
<td>40-53 %</td>
</tr>
<tr>
<td><strong>CRP</strong></td>
<td>5.26</td>
<td>1.41</td>
<td>11.9</td>
<td>&lt;5 ug/ml</td>
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<tr>
<td><strong>HDL-C</strong></td>
<td>-</td>
<td>27</td>
<td>24</td>
<td>29.0-85.0 mg/dl</td>
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<tr>
<td><strong>LDL-C</strong></td>
<td>-</td>
<td>94</td>
<td>151</td>
<td>0.0-130 mg/dl</td>
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<td><strong>HIV 1+2(ELISA)</strong></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>HIV 1,2 (WB)</strong></td>
<td>HIV 1(+)</td>
<td>HIV 1(+)</td>
<td>HIV 1(+)</td>
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<tr>
<td><strong>HIV-VL</strong></td>
<td>146000</td>
<td>184000</td>
<td>813000</td>
<td>&lt;50 copy/mL</td>
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<tr>
<td><strong>HAslgG</strong></td>
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<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>HBsAg</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>HBsAb</strong></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>HCVAb</strong></td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>CD4</strong></td>
<td>9.36</td>
<td>6.21</td>
<td>10.7</td>
<td>27-51 %</td>
</tr>
<tr>
<td><strong>CD8</strong></td>
<td>80.86</td>
<td>67.4</td>
<td>51.2</td>
<td>14-44 %</td>
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<tr>
<td><strong>HLA-DR positive</strong></td>
<td>74.92</td>
<td>78.4</td>
<td>-</td>
<td>28.36-46.1 %</td>
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<tr>
<td><strong>STS</strong></td>
<td>-</td>
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<td>+</td>
<td></td>
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<tr>
<td><strong>Amoebiasis test</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
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<tr>
<td><strong>Chlamydia(Sero)</strong></td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
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<tr>
<td><strong>Toxoplasmosis</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
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<tr>
<td><strong>IgM</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Cryptococci neoformans(S)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td><strong>CMV(sero)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>CMV IgG(B)</strong></td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>CMV IgM(B)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>AFB</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>
Discussion

HIV

- Oral clinical features
- Other clinical features
- The relationship between the oral pathosis and HIV

HIV P’t in dental treatment
HIV (Human Immunodeficiency Virus)

- Identified in 1983 (AIDS)
- Previous names
  - Immune Deficiency-Associated Virus (IDAV)
  - Human T-lymphotropic virus-III (HTLV-III)
- Designated in 1986
Initially discovered and termed LAV
More virulent, relatively easily transmitted
Cause of the majority of HIV infections globally

Less transmittable than HIV-1
Largely confined to West Africa
The majority of HIV infections:
- Contact with the genital, oral, or rectal mucous membranes of another

Sexual route:
- Intravenous drug users
- Recipients of blood transfusion
- Reuse of needles
- Health care workers

Blood or blood product route:
- Pregnancy
- Intrapartum at childbirth

Mother-to-child transmission (MTCT)
Stage I:
- Asymptomatic, not categorized as AIDS

Stage II:
- Minor mucocutaneous manifestations, recurrent upper respiratory tract infections

Stage III:
- Unexplained chronic diarrhea for longer than a month, severe bacterial infections, pulmonary tuberculosis

Stage IV: Indicators of AIDS
- Toxoplasmosis of the brain, candidiasis of the esophagus, trachea, bronchi or lungs and Kaposi’s sarcoma.
Stage I:
- Asymptomatic, not categorized as AIDS

Stage II:
- Minor mucocutaneous manifestations, recurrent upper respiratory tract infections

Stage III:
- Unexplained chronic diarrhea for longer than a month, severe bacterial infections, pulmonary tuberculosis

Stage IV: Indicators of AIDS
- Toxoplasmosis of the brain, candidiasis of the esophagus, trachea, bronchi or lungs and Kaposi's sarcoma.
## Systemic Symptoms of AIDS

- **Fevers**
- **Sweats** *(particularly at night)*
- **Chills**
- **Swollen lymph nodes**
- **Sore throat**
- **Weakness**
- **Weight loss**
- **Diarrhea**
- **Joint and muscle aches**
Oral and Oropharyngeal Infections

- Oral candidiasis
- Periodontal disease
- Gingival bleeding
- Aphthous stomatitis
- Herpetic stomatitis
- Cervical lymphadenopathy
- Deep neck space infections

- Otitis media
- Otomycosis
- Sensory neural hearing loss
**Pulmonary Infections**

- Pneumocystis pneumonia
- Tuberculosis

[Images of chest X-rays showing lung conditions]
Gastrointestinal Infections

- Esophagitis
- Chronic diarrhea
Toxoplasmosis
Progressive multifocal leukoencephalopathy (PML)
Tumors and Malignancies

- Kaposi’s sarcoma
- Burkitt’s lymphoma
- Hodgkin’s disease
- Anal and rectal carcinoma

Kaposi’s sarcoma
Oral Features of HIV/AIDS
Oral Lesion of HIV Positive Patients

- Oral lesions in *symptomatic stage* or *pre-AIDS stage* when CD4+ lymphocyte counts are reduced and range from 200~800 per μl

  - Hairy leukoplakia
  - Pseudomembranous candidiasis
  - Diffuse herpes simplex gingivostomatitis
  - Gingivitis/periodontitis
  - Acute nonspecific ulcers
  - Diffuse varicella-zoster lesion
Pseudomembranous candidiasis
Hairy leukoplakia
Acute nonspecific
Necrotizing ulcerative gingivitis

Herpes simplex virus infection

Varicella zoster virus infection
Oral Lesions of AIDS Stage

Infection

- Candidiasis – intra oral, esophageal
- Diffuse herpes simplex gingivostomatitis
- Diffuse varicella–zoster lesion
- Cryptococcosis
- Histoplasmosis
- Herpes simplex infection
- Cytomegalovirus ulcer
- HIV gingivitis/periodontitis
Oral Lesion of AIDS Stage

Neoplasm
- Kaposi’s sarcoma
- Non-Hodgkin’s lymphoma
Are oral candidiasis and hairy leukoplakia related to the CD4 and viral load kinetics during HIV infection?

The onset of OC and/or OHL is heralded by the sequence of a sustained reduction of CD4+, with an associated sharp increase of VL.

After adjustment for clinical stage and antiretroviral use, the main factor associated with the development of either oral lesion and OC was CD4+ count.

OC predicted CD4\(^+\) counts, changes in CD4\(^+\) counts, and AIDS-defining disease occurrences after adjustment for VL.

OHL predicted CD4\(^+\) counts but not a change in CD4\(^+\) count.

Number of OC episodes was the most significant predictor for change in CD4\(^+\) count after adjustment for antiretroviral medications.


Oral Candidiasis or oral hairy leukoplakia can predicted CD4 \(^+\)
The relationship of smoking and CD4 counts, OC, OHL, or HIV-OD

What is more important in the development of oral candidiasis in HIV-infected patients, low CD4 counts or high viral load?

**CD4 hallmark predictor:** 200 cells/L.

**VL < 36000 copies/ml →** no confounding effects of CD4

**VL > 36000 copies/ml**
- CD4 → < 45 cells/L → 100% OPC+
- 45 ~ 150 cells/L → 20% OPC+
- 150 ~ 500 cells/L → 100% OPC+

**Viral load was more important than CD4 cell number as a predictor of OPC**

Oral Care and Treatment Protocols in HIV
Consent:
  • Based on a patient’s voluntary authorization

Confidentiality:
  • Not absolute

Dental duty of care:
  • Unethical to refuse

Does an oral health care worker have a professional obligation to disclose their own HIV?
• “It was both safe and desirable to make regular dental care available to HIV-positive patients.”

ADA 1994:
Circumstances when routine dental treatment may need to modified:

- Low CD4 lymphocyte levels predispose to oral lesions requiring specific treatment
- Reduced platelet levels below 60,000 cells mm$^3$- (normal 150,000~400,000) effect clotting time
- Reduced neutrophil levels below 500 cells mm$^3$- (normal 2500~7500) may require antibiotic prophylaxis
- Patients with late stage AIDS may require a rolling treatment plan with regular reviews of ability to attend and withstand treatment
Consensus guidelines:

- Screen for HIV-related oral lesions and treat if necessary
- Screen for xerostomia as a possible symptom of HIV or as side-effect of HAART

Blood analysis—assist in planning treatment

- Prevent further disease

Local anesthetic:

- Patients with HAART medications (breakdown in liver function)
No evidence-based data support the need for routine antibiotic to prevent bacteremia and septicemia

**Indications:**

- CD4+ ≤200 per μl
- PMNL ≤ 500 per μl, before oral surgery (antibacterial mouthrinse and scaling)
- Patients infected HIV via IV drug use → at risk for developing endocarditis
Conclusion

Oral candidiasis can be the first manifestation of HIV infection.

OC present $\rightarrow$ VL $\uparrow$

Aggressive dental procedure could be delayed if oral candidiasis present

Consent was not absolutely right
References

- [http://hiv.buffalo.edu/hivlifecycle.shtml](http://hiv.buffalo.edu/hivlifecycle.shtml)
- HIV manifestations in otolaryngology/Received 2 May 2005/H.K.C. Prasad 180 et al.
- HIV Phenotypes, Oral Lesions, and Management of HIV-related Disease/E. Blignaut1*, L.L. Patton2, W. Nittayananta3,


Oral lesions as indicators of HIV infection among routine dental patients in Lagos, Nigeria / GA Agbelusi, AA Wright/Oral Diseases (2005) 11, 370 – 373


Thank you for your kind attention