

# ***Epidemiology Bulletin***

REPUBLIC OF CHINA

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### **First Female AIDS Case in Taiwan Area**

A 36 year-old female, suspected prostitute, who had cough, chest pain, dyspnea, poor appetite, weight loss, and intermittent fever for 8-9 days came to the Emergency room of Kaohsiung medical college Hospital on May 29, 1988. The general physical examination showed: body weight 46 Kg, normal temperature, tachypnea and tachycardia, blood pressure 90/40 mmHg, clear consciousness, mild anemia on conjunctiva, no jaundice on sclera, no abnormality of skin, soft neck, no heart murmur bibasilar inspiratory crackles over both lung field, no hepatomegaly or splenomegaly, no pitting edema on lower limbs, cyanosis of finger nails and nonpalpable lymph nodes. Blood examination showed; RBC.  $4.66 \times 10^6/\text{mm}^3$ , Hb. 9.7 g/dl, Hct. 31.2%, normal platelet count. The patient left the hospital with some improvement of respiration. The Arterial blood gas showed serious hypoxia ( $\text{PaO}_2 = 36$  mmHg on Room Air), Chest X-ray revealed 5 lobe interstitial pulmonary infiltration. The patient was requested by mail to return to the hospital under suspicious of some specific pulmonary infection.

The patient was hospitalized through the emergency room on July 26 with complaint of intermittent fever (38-40°C), dyspnea, dysphagia and severe weight loss. The general physical examination showed: body weight 29 Kg (a loss of 17 Kg in two months), body temperature 38.3°C, pulse 108/minute, respiration 26/minute, blood pressure 110/70 mmHg and serious candida infection in oral cavity. The blood examination showed: severe anemia, RBC  $3.93 \times 10^6/\text{mm}^3$ , Hb 4.8g/dl, Hct 27.1%, WBC 3300/ $\text{mm}^3$ , lymphocyte less than 1%, and platelet  $223 \times 10^3/\text{mm}^3$ . The general biochemical examination showed normal except a low albumin at 1.5g/dl. Arterial blood gas showed a serious hypoxia  $\text{PaO}_2 = 43$  mmHg on Room Air, and Chest X-ray showed diffuse interstitial infiltration of both lungs. On July 26, HIV antibody was detected by ELISA method with positive result which was confirmed by western blot. The case was presented to the AIDS control committee of the Department of Health on July 28 and declared to be the first female AIDS case in Taiwan. The patient has been isolated since admission to the Hospital on July 26. Because he had intermittent fever (38-40°C), rising CRP, and oral cavity and sputum culture showed candida albicans, both antibiotics and Antifungal drugs were given. Septrin at 2 vials every 8 hours and pentam

at 1/3 vial (100mg) per day were given based on the interstitial infiltration on chest x-ray with hypoxia which suggested pneumocystis carinii pneumonia.

He was also medicated with Retrovie 100mg per every 4 hours (3.45 mg per Kg every 4 hours) and anti-TB drugs. Though pneumocystis carinii pneumonia was unable to be confirmed through sputum, bronchoscopy biopsy or open lung biopsy, necropsy reported that it was pneumocystis carinii pneumonia with cytomegalovirus infection.

After several packed RBC transfusion during hospitalization, anemia was improved (Hb 4.8 g/dl on 26 July and 11.8 g/dl on 4 August), but platelets decreased ( $223 \times 10^3/\text{mm}^3$  on 26 July and  $71 \times 10^3/\text{mm}^3$  on 4 August). Immunological examination showed that IgE and IgA had increased significantly, IgE about 4 times of the normal value and IgA about 2.5 times of the normal value. IgG, IgM and C<sub>3</sub> had declined, C<sub>3a</sub> and C<sub>4</sub> remained normal. During hospitalization, the absolute lymphocyte was also declined significantly. The absolute lymphocyte on 27 July was  $280/\text{mm}^3$  (14.1% of normal person), it went down to  $160/\text{mm}^3$  (8% of normal person) on 2 August. The OKT<sub>4</sub>/OKT<sub>8</sub> was also declined, OKT<sub>4</sub>/OKT<sub>8</sub> (16.5/41.2)=0.4 on July 27, OKT<sub>4</sub>/OKT<sub>8</sub> (13.9/42.9)=0.32 on August 2. The lymphocyte transformation index was declined too: PHA (491/390)=1.26, CONA (539/390)=1.52 and PWA (788/390)=2.02.

The condition of the patient was unstable during the period of hospitalization. The patient had severe dysphagia and dyspnea. The patient was unconscious and in shock status in the afternoon of July 30, following respiratory failure. Arterial blood gas showed  $\text{pH}=7.262$ ,  $\text{PaCO}_2=30.6$ ,  $\text{PaO}_2=27$  and  $\text{HCO}_3^- = 14$ . Endotracheal tube and respirator were implaced, and Dopamine administered. The patient became conscious, the blood oxygen improved, and the blood pressure stable (110/70 mmHg). The patient had respiratory failure again on August 2,  $\text{PaO}_2=40$  ( $\text{FiO}_2$  100%). She had slow heart beat (30-40/minute), premature ventricular beat, and coma. The  $\text{FiO}_2$  was increased to 100%, peep to 10cm H<sub>2</sub>O, and xylocaine was given. The patient regained consciousness again but developed respiratory failure on August 4 and died at 15:45 the same day.

The case was confirmed to be AIDS. This was the sixth AIDS case in Taiwan and the second one identified by the Hospital<sup>1</sup>. The case had some public health implications: it was the first female case, she was not homosexual but a bar-girl and was different from other prostitutes. Her customers included the locals but primarily foreign ship crew in transit. Therefore, the chances of AIDS spreading in the country have increased. In addition to the serological epidemiological surveillance of the risk groups<sup>2</sup>, medical and nursing personnel should pay more attention to particularly young patients of specific infections. The identification of this case was due to the alertness of physicians to the specific infection of lung. The finding was further confirmed through serological testings.

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