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COVID-19 mimicking dengue fever with the initial manifestation of retro-orbital pain — A Rare Case



Coronavirus disease 2019 (COVID-19) is a respiratory disease caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2).¹ Reports have demonstrated that most patients present with fever, fatigue, muscle pain, upper respiratory tract or intestinal symptoms.² While the outbreak of COVID-19 has resulted in more than 4 000 000 infected in worldwide, there is no report or case on the association of COVID-19 with orbital pain.³ Herein, we report a rare case of a 62-year-old Taiwanese female initially presenting retro-orbital pain with fever, mimicking Dengue fever. The patient was quickly identified to have been infected by SARS-CoV-2 and was hospitalized on March 15, 2020.

On March 14, 2020, a female with a medical history of bronchial asthma disclosed that she had returned to Taiwan after a Philippines travelling from March 7 to March 14. On March 12th, the patient began to have bilateral retro-orbital pain, headache and low-grade fever after attending her family gathering party. Her younger brother simultaneously had fever, a dry cough, and muscle pain and was later confirmed to have a SARS-CoV-2 infection in the USA.

Upon arrival to Taiwan Taoyuan International Airport, nasal swab were taken for SARS-CoV-2 testing based on the symptom of low grade fever. The patient directly sought medical assistance at emergency department of a regional hospital. Subsequently, laboratory data showed levels of aspartate aminotransferase of 78 U/L, alanine aminotransferase of 41 U/L, γ -glutamyl transferase of 105 U/L. Chest radiography showed no evidences of pneumonia (Fig. 1). Both Influenza PCR and Dengue virus ELISA had negative results. After evaluation, the patient was discharged and was advised to quarantine at home.

The following day, Taiwan Centers for Disease Control notified her the positive results of SARS-CoV-2 infection, and she was hospitalized in the negative pressure isolation room. On admission day 1 (March 15th), Hydroxychloroquine (200 mg three times a day) was administered. On admission day 3, she had low grade fever, severe dry

mouth and persistent eye pain. Treatment was altered to Lopinavir–Ritonavir (200mg/50mg/tab) twice a day. Following 7 day of this treatment, the retro-orbital pain slowly improved, while low grade fever was still persistent. Therefore, Lopinavir–Ritonavir was discontinued. On admission day 15, the patient's fever subsided. After the three times negative results of SARS-CoV-2 RT-PCR from nasal swab samples, she was then discharge on admission day 39.

Here, we reported a case of COVID-19 with fever, headache and retro-orbital pain after a week-long trip to

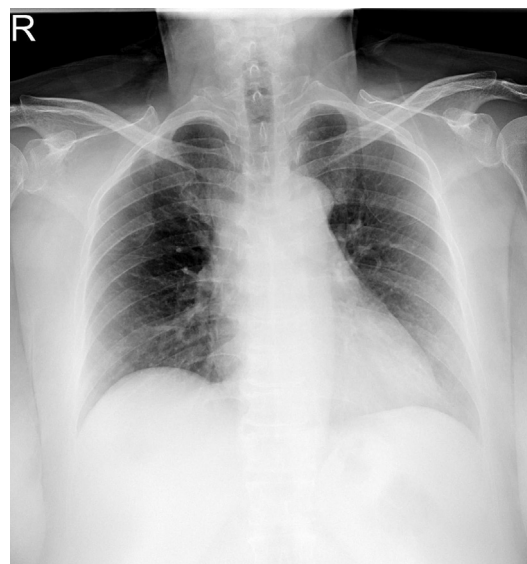


Figure 1 On arrival to emergency department, chest radiography showed normal heart size and no evidence of pneumonia.

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the tropics or subtropics, which mimics the classic manifestation of dengue fever.^{4,5}

Author's contribution

First author, an emergency medicine resident, M.D. Walis Ruiy conceived the presented idea, wrote the manuscript and followed daily the clinical conditions of this case. Second author, an emergency physician, M.D. Shih-Yung Hsu initially differential diagnosis include typical appearance of Dengue fever when this patient first visited the emergency department, and finally diagnosis of COVID-19. Third author, an emergency physician, M.D. Hsien-Lung Tsai encouraged W.R. to investigate COVID-19 and contributed to the adjustment of the references and supervising the findings of this work. Fourth author, chief of the emergency department, M.D. Chen-Te Chen care this case from emergency department to negative pressure isolation room for the hospitalization, and helped develop the infection control flow. Fifth author, a infectious disease physician, center of infection control doctor, M.D. Chih-Peng Tseng guided the medication and treatment of this case, and engaged in daily discussions with the attending physician. Correspondence author, chief of chest medicine and attending physician of this case, M.D PhD. Wei-Teing Chen took the lead in writing the manuscript, and was in charge of overall direction and planning of this work. All authors discussed the results, reached a consensus and contributed to the final manuscript.

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Declaration of Competing Interest

The authors have no conflicts of interest relevant to this article.

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Walis Ruiy
Shih-Yung Hsu
Hsien-Lung Tsai
Chen-Te Chen

Department of Emergency, Cheng Hsin General Hospital, Taipei, Taiwan

Chih-Peng Tseng
Division of Infectious Diseases, Cheng Hsin General Hospital, Taipei, Taiwan

Wei-Teing Chen*
Division of Chest Medicine, Cheng Hsin General Hospital, Taipei, Taiwan

National Defense Medical Center, Taipei, Taiwan

*Corresponding author. No. 45, Zhenxing St., Beitou Dist., Taipei 112, Taiwan. Fax: +886 2 2826 4400.
E-mail address: unirigin@gmail.com (W.-T. Chen)

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