



Premier cas confirmé de COVID-19 importé en Tunisie

First case of imported and confirmed COVID-19 in Tunisia

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INTRODUCTION

In December 2019, an outbreak of pneumonia due to unknown cause occurred in Wuhan, China. The World Health Organization (WHO) was alerted about this severe Flu-like syndrome which rapidly spread throughout the country, then around the world. The causative pathogen of this disease was confirmed as a novel *Coronavirus*, (Severe Acute Respiratory Syndrome, SARS-CoV-2) and the disease officially named COVID-19 (as *Coronavirus Disease 2019*) (1). On the 11th of March 2020, the WHO characterized COVID-19 as a pandemic causing a global public health threat (2). We report, herein, the first imported confirmed case of COVID-19 in Tunisia.

CASE REPORT

A 42 years old Tunisian man, with no comorbidities except of smoking, was admitted in our department, on the 3rd of March 2020. He traveled to Italy (Emilia Romagna region) on 18th to 27th of February 2020. On day-1 after returning, he developed chills and fatigue. The patient called the emergency medical assistance (SAMU-05) from home. A nasopharyngeal swab (NPS) was performed after clinical evaluation. He was tested by SARS-CoV-2 real-time reverse

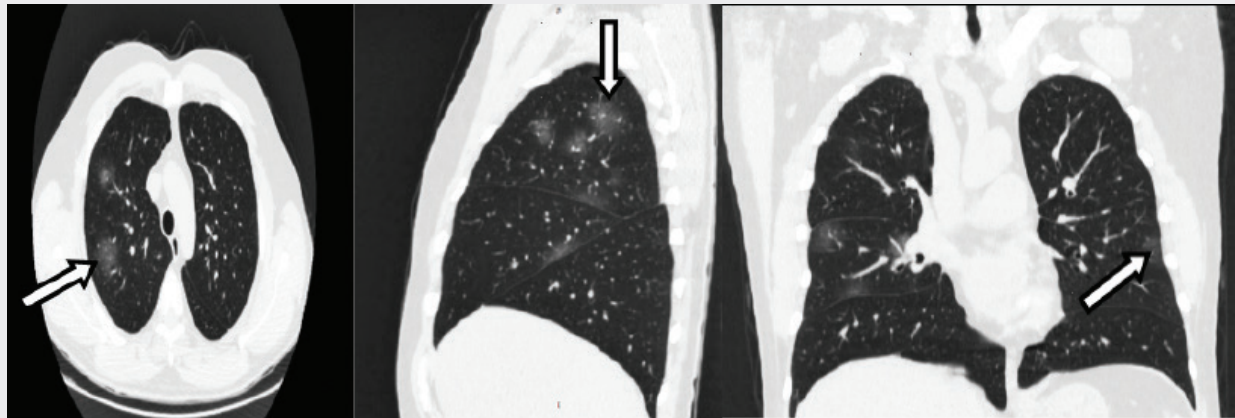
transcription PCR (RT-PCR), with a positive result (CT=21). This confirmation was performed at our National Reference Laboratory. Viral RNA was extracted from 140 µL of NPS using the QIAamp® Viral RNA Mini Kit (Qiagen®, Courtabœuf, France). For SARS-CoV-2 RNA detection, the in-house RT-PCR was used according to the Hong Kong protocol (based on two monoplex assays: the N gene RT-PCR as a screening assay and the Orf1b assay as a confirmatory one) (3). At admission, his physical examination was normal except of mild dry cough and tachycardia, over 100 bpm. His oxygen saturation was over 97%. The C-reactive protein was at 24 mg/L. White blood cells count and lymphocytes, transaminases and creatinine levels were within normal range. The chest CT-scan showed multiple bilateral and peripheral ground glass opacities (*fig 1*). He had been treated orally by atazanavir 300 mg once daily, oseltamivir 75 mg twice daily associated with chloroquine 250 mg twice daily, for 5 days. During hospitalization, he was afebrile with resumption of normal heart pulse and no oxygen therapy need. On March 12th, the control RT-PCR SARS-CoV-2 was still positive. On March 15th, the PCR was negative. The virus clearance was confirmed two days after (*fig 2*). The standardized contact investigation around the patient revealed that all his family contacts were asymptomatic for the following 2 weeks and were tested SARS-CoV-2 negative.

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A. Axial Lung window B. Sagittal lung window C. Coronal lung window

Figure 1. Chest CT scan imaging :asymetric, bilateral, subpleural and peripheral ground glassopacities.

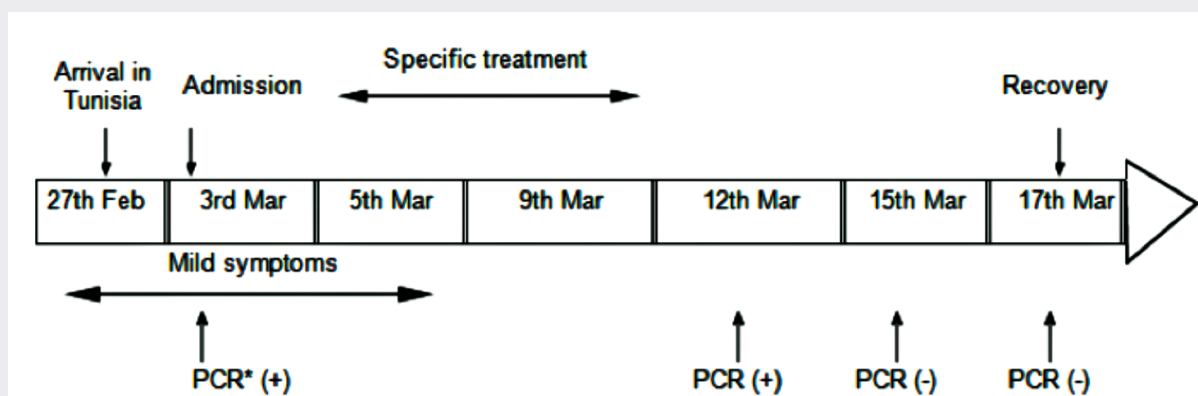


Figure 2. Medical history timeline. * Nasopharyngeal swab

DISCUSSION

This first Tunisian imported confirmed case of COVID-19 illustrates the efficacy of a surveillance system to detect the probably first imported case, with mild features of the disease. COVID-19 ranges from asymptomatic, to SARS and death. Tang et al found that the viral load in upper respiratory specimens of asymptomatic patients had similar levels as symptomatic patients, suggesting a similar transmission potential of the two groups of patients (4). In a large-scale epidemiological survey of all COVID-19 cases, reported by the Chinese CDC and Prevention, including 72314 laboratory-confirmed cases, 889 (1.2%) asymptomatic cases were noted (5). It is important to

consider that some of the individuals infected with SARS-CoV-2 may not display any symptoms and may become a potential source of infection. Recently, Romagnani has reported how blanket testing in a completely isolated village of roughly 3000 people in northern Italy saw the number of people with COVID-19 symptoms fall by over 90% within 10 days (6).

Although paucisymptomatic, the chest CT imaging of our patient showed multiple bilateral and peripheral ground glass opacities indicating pneumonia. A Chinese study enrolling 81 patients with COVID-19 pneumonia showed that 15 cases of asymptomatic infection were discovered on the basis of abnormal lung findings on chest CT scans. It suggests that chest CT scan should be done

in asymptomatic highrisk individuals with a history of exposure to patients with COVID19 pneumonia to facilitate early identification of the disease. The typical pattern of chest CT images in these patients was unilateral, multifocal, predominantly groundglass opacities (7).

At present, there is no evidence to support specific drug treatment against the novel- *Coronavirus* in confirmed cases. Several clinical trials are in the process of comparing treatments against the *Coronavirus*. We quote the one published by Gautret which despite its small sample size showed that hydroxychloroquine treatment was significantly associated with viral load reduction/ disappearance in COVID-19 patients and its effect was reinforced by azithromycin (8).

CONCLUSION

The specific COVID-19 surveillance permitted to detect this first imported case, at a very early stage of the disease. This case highlights the contribution of the chest CT-Scan in the managing of COVID-19. The decision and the relevance of a specific treatment in similar cases is still debated.

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