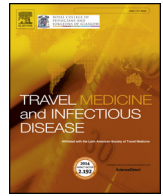




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Correspondence

COVID-19 in a tertiary hospital from Romania: Epidemiology, preparedness and clinical challenges



Dear Editor,

Since December 2019 a new coronavirus, later named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), produced an atypical cluster of pneumonia, now known as Coronavirus Disease 2019 (COVID-19) in China, Wuhan city area, and spread rapidly worldwide [1]. As with other severe respiratory infections, prevention is a challenge [2].

Around 5 million Romanians are working in Western Europe (especially in Italy -around 1 million, but also in Spain, France, Germany, United Kingdom) and they regularly travel back to Romania [3]. Following SARS CoV-2 spread in Italy and shortly after in Spain, France, UK and other western european countries and the lockdown of most economical activities, tens of thousands of Romanians returned home, creating a huge potential for imported cases.

The first case of COVID-19 in Romania was registered on 26th of February, in a contact of an Italian infected person, followed by a few cases every day, until March 10, when the number of cases increased rapidly. Out of 261 cases reported until March 18, 49% were imported (66% from Italy, 5% from each France, Germany and Spain, 4% from each Austria and UK and 3% from Israel). 14 countries contributed with imported cases; there were no cases from China or South-East Asia [4].

Dr. Victor Babes hospital is a tertiary university hospital for infectious and tropical diseases with 490 beds and 9 intensive care unit beds. In March 2020, we discharged hospitalized patients, stopped admission of new patients and prepared the hospital as a COVID-19 hospital. We trained the staff for COVID-19 case management., organised the staff into separate teams, each team working for 6–9 days, as the other teams remained in wait to enter when the number of COVID-19 cases will increase.

The laboratory diagnostic for COVID-19 is performed by Real-Time PCR with manual nucleic acid extraction technique (MasterPure™ Complete DNA and RNA Purification Kit", Lucigen) and RNA detection and quantification with "genesig®Real-Time PCR assay"/Primer design™ Ltd, in vitro Real-Time PCR diagnostic test for Coronavirus (COVID-19), targeting RNA dependent RNA polymerase -RdRp) on a Real-time PCR Light Scanner 32/LS32 (Idaho Technology, DOOR).

The first cases were admitted in our hospital on March 9 (3 cases from the same family) and until March 26 there were 126 hospitalized patients, with a median age of 43,5 years (range 3–87 years), and a male/female sex ratio of 1.04. Daily admission varied between 1 and 30, with 3 peaks: on March 17 (30 cases), March 21 (20 cases) and March 22 (17 cases).

Forty four cases (34.9%) were imported from 13 countries: Austria (10 cases), Italy (9), UK (8), Spain [4], France [3], Germany, Luxembourg (2 cases each), Israel, Norway, Lithuania, Turkey, Belgium, Netherlands (one case each). Travelers surveillance may be a good indicator for early outbreaks, since the Israel imported case has returned on February 29, when only 7 cases were reported there. Significantly,

another person who returned from Israel on the same date, was later hospitalized in a general hospital, with symptoms unrelated to COVID-19, developed a severe pneumonia, and lead to a local outbreak with at least 50 cases (47 patients hospitalized in our hospital).

Most cases were mild; nevertheless 8 patients were admitted in ICU and 3 died (all 3 with epidemiological contact in a renal dialysis center, all with underlying diseases and with chronic renal dialysis). Apart from the already known [1] clinical features of COVID-19 (fever, cough, shortness of breath, myalgia, sore throat, headache or diarrhea) a sudden onset of anosmia and/or dysgeusia was registered in 20% of patients, all mild cases. Although anosmia has also been described in other respiratory virus infections (rhino-, entero-, adeno-, paramyxoviruses or syncytial respiratory virus) [5], it can represent an early indicator for COVID-19 and we advised ENT specialists to screen for SARS-CoV-2 in patients presenting with anosmia and dysgeusia.

The rapid spread of SARS-CoV-2 is an impressive model of a travel-related disease, and Romania is definitely one of the best examples of this type. The epidemic started in Romania with multiple imported cases throughout the country, all, but the Israel imported ones, coming from Western Europe, a rapid increase in the number of infected patients is ongoing (1029 confirmed cases and 24 deaths on March 26), despite an almost complete lockdown of the country. Surveillance and isolation/quarantining all incoming travellers was applied in India, during the Nipah outbreak in 2018 and is replicated now, during the COVID 19 pandemic, its value as a reliable prevention model early during an epidemic remain to be proven.

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Corneliu Petru Popescu^{*1}

Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

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*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*
E-mail address: cornel160@yahoo.com.

Alexandru Marin¹
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Violeta Melinte¹, George Sebastian Gherlan¹
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Filofteia Cojanu Banicioiu¹, Adelina Dogaru¹, Sebastian Smadu¹,
Ana Maria Veja¹, Elena Nedu¹, Delia Stanciu¹, Bianca Voinescu¹
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Valentina Simion¹
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Andreea Toderan¹, Amalia Dascalu¹, Corina Oprisan¹, Gratiela Tardei¹
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Maria Nica¹
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Emanoil Ceausu¹
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

Simona Maria Ruta¹
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
Stefan S. Nicolau Institute of Virology, Bucharest, Romania

Simin Aysel Florescu¹
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
*Dr Victor Babes Clinical Hospital of Infectious and Tropical Diseases,
Bucharest, Romania*

* Corresponding author.

¹ All authors contributed equally to this manuscript.