

STROKE INCIDENCE IN SARS-COVID EPIDEMICS: THE EXPERIENCE OF ODESSA

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COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins Universit... ☰

Global Cases
113 046 901

- Cases by
Country/Region/Sovereignty
- 28 413 376** US
 - 11 063 491** India
 - 10 390 461** Brazil
 - 4 175 757** Russia
 - 4 166 727** United Kingdom
 - 3 746 475** France



Cumulative Cases Active Cases Incidence Rate Case-Fatality Ratio Testing Rate

Global Deaths
2 508 796

- 508 307 deaths US
- 251 498 deaths Brazil
- 183 692 deaths Mexico
- 156 825 deaths ...

Global Deaths

US State Level
Deaths, Recovered

- 51 395 deaths, **recovered** California US
- 47 264 deaths, **recovered** New York US
- 43 085 deaths, **2 380 295** recovered

US Deaths, R...

Situation in Ukraine

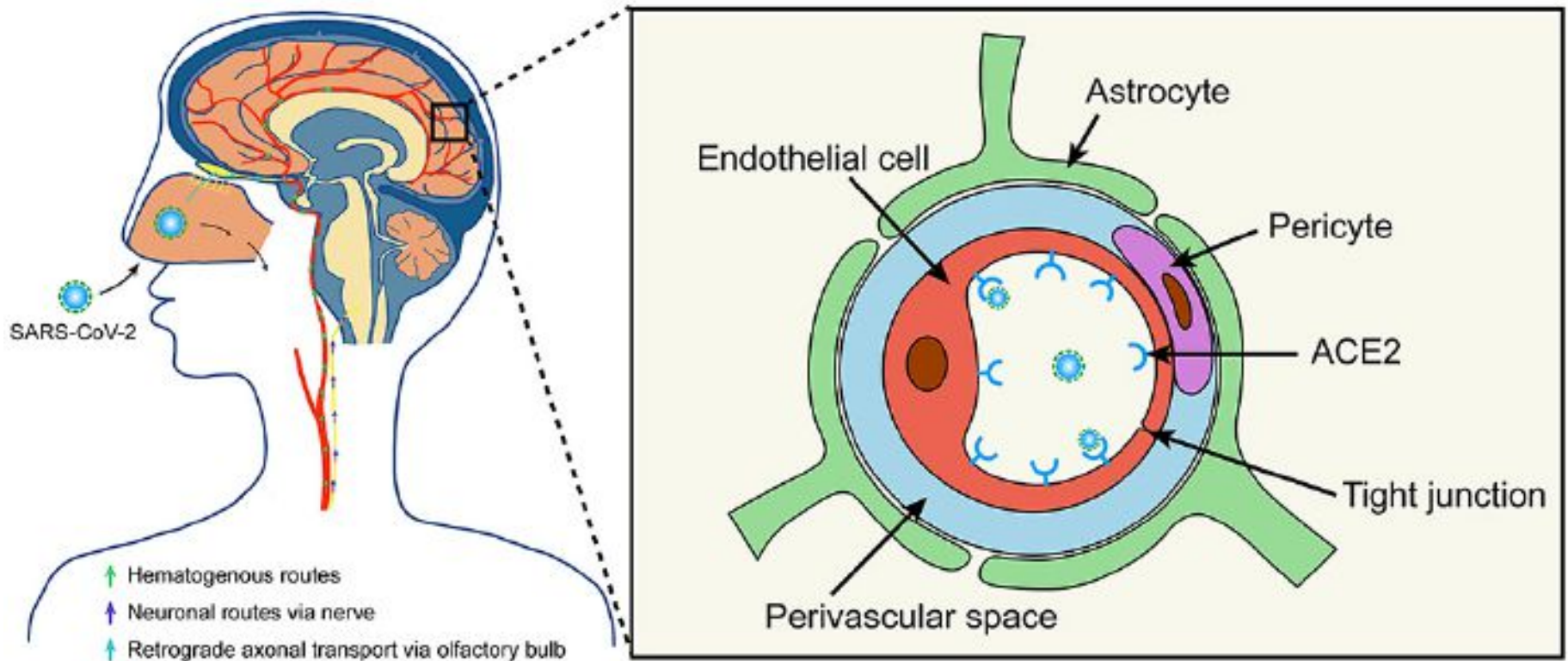
1 333 844
laboratory confirmed cases of the disease

8 003
new cases per day

1 163 555
recovered from the coronavirus

25 742
deaths of people infected with coronavirus

6 845 974
total of tests



The reported incidence of acute ischemic stroke in COVID-19 patients ranges from 2.5 to 5%.

Wang Zilan, Yang Yanbo, Liang Xiaolong, Gao Bixi, Liu Meirong, Li Wen, Chen Zhouqing, Wang Zhong COVID-19 Associated Ischemic Stroke and Hemorrhagic Stroke: Incidence, Potential Pathological Mechanism, and Management . *Frontiers in Neurology* . 2020. Vol.11 P. 1152 URL=<https://www.frontiersin.org/article/10.3389/fneur.2020.571996> DOI=10.3389/fneur.2020.571996

JAMA Neurology | **Original Investigation**

Neurologic Manifestations of Hospitalized Patients With Coronavirus Disease 2019 in Wuhan, China

Ling Mao; Huijuan Jin; Mengdie Wang; Yu Hu; Shengcai Chen; Quanwei He; Jiang Chang; Candong Hong; Yifan Zhou; David Wang; Xiaoping Miao; Yanan Li, MD, PhD; Bo Hu, MD, PhD

IMPORTANCE The outbreak of coronavirus disease 2019 (COVID-19) in Wuhan, China, is serious and has the potential to become an epidemic worldwide. Several studies have described typical clinical manifestations including fever, cough, diarrhea, and fatigue. However, to our knowledge, it has not been reported that patients with COVID-19 had any neurologic manifestations.

OBJECTIVE To study the neurologic manifestations of patients with COVID-19.



DESIGN, SETTING, AND PARTICIPANTS This is a retrospective, observational case series. Data were collected from January 16, 2020, to February 19, 2020, at 3 designated special care centers for COVID-19 (Main District, West Branch, and Tumor Center) of the Union Hospital of

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“5.7% of patients with a severe course of coronavirus infection may develop stroke”

Acute cerebrovascular disease following COVID-19: a single center, retrospective, observational study

Yanan Li,¹ Man Li,¹ Mengdie Wang,¹ Yifan Zhou,¹ Jiang Chang,² Ying Xian,³ David Wang ,⁴ Ling Mao,¹ Huijuan Jin,¹ Bo Hu ¹

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YL, ML, MW, YZ and JC contributed equally.

YL, ML, MW, YZ and JC are joint first authors.

ABSTRACT

Background and purpose COVID-19 is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Apart from respiratory complications, acute cerebrovascular disease (CVD) has been observed in some patients with COVID-19. Therefore, we described the clinical characteristics, laboratory features, treatment and outcomes of CVD complicating SARS-CoV-2 infection.

Materials and methods Demographic and clinical characteristics, laboratory findings, treatments and clinical outcomes were collected and analysed. Clinical

varied considerably, ranging from asymptomatic infection to severe pneumonia that may lead to respiratory failure and death.³

We recently reported the clinical manifestations and outcomes in 214 patients with COVID-19 infection and found that severe patients had commonly complicated neurological symptoms including consciousness impairment (14.8%) and skeletal muscle symptoms (19.3%).⁴ Previous study has suggested that bacterial and/or viral infection

“incidence of stroke in COVID-19 patients is about 5% with an average age of 71.6 years”

The aim

to assess the stroke incidence in Odessa in the context of the COVID epidemic.

Material and methods

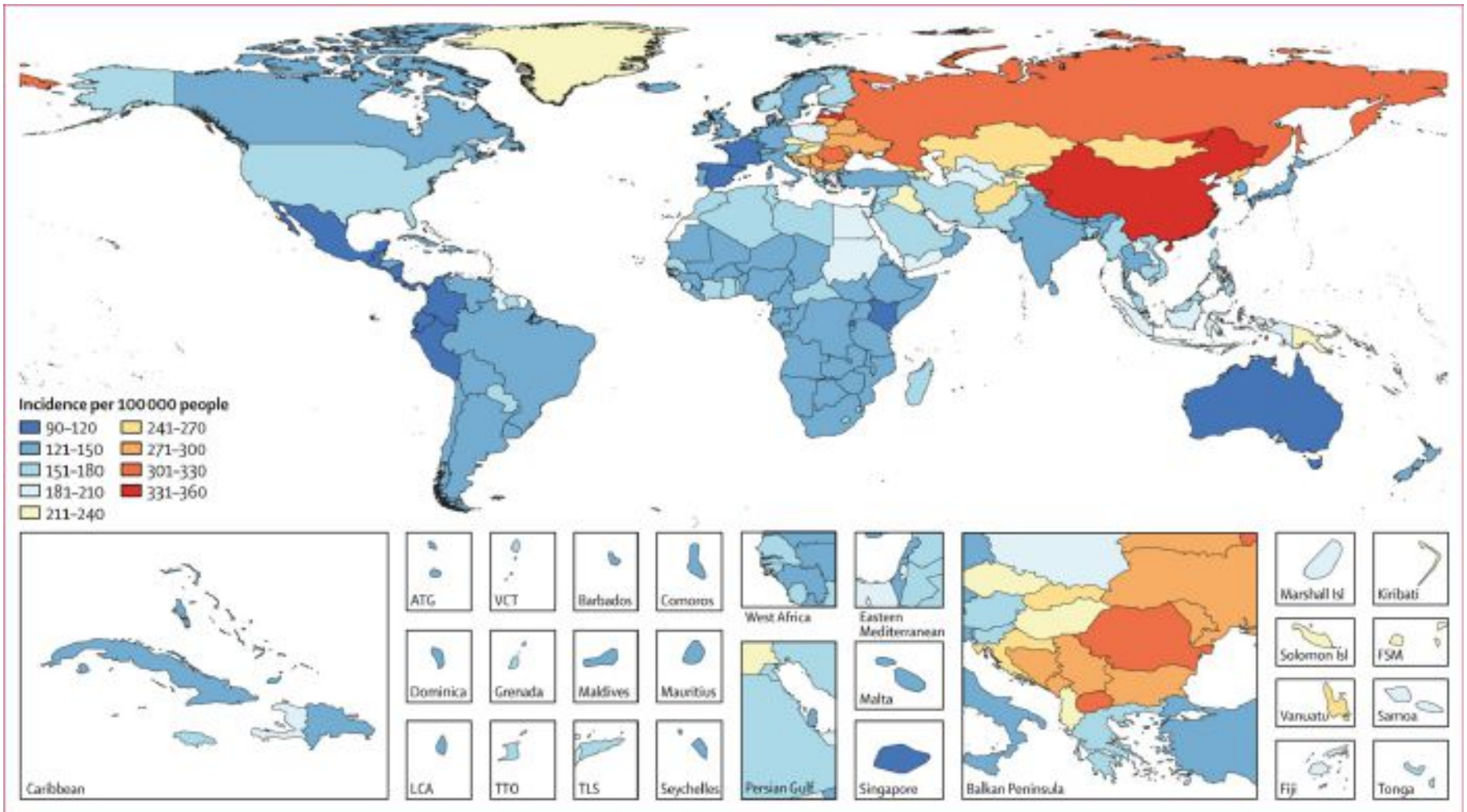
The analysis of reports on hospitalization of patients with stroke for 2019-2020 was carried out.

We studied the incidence of strokes in patients under 50 years of age, as well as the incidence of stroke detection in patients with manifestations of acute COVID infection, as well as convalescents after COVID.

Results

According to the Odessa Regional Laboratory Center of the Ministry of Health of Ukraine, as of January 15, 2021, 77,753 cases of COVID-19 were registered in the Odessa region. Of these, 34,839 people are residents of Odessa. It was found that, compared to 2019, the number of hospitalizations has changed slightly - from 933 to 976 hospitalizations per year ($\Delta = + 4.4\%$), which corresponds to 93.3 and 97.6 cases per 100,000 population. The number of stroke patients under the age of 50 did not exceed 10% of the total number of hospitalizations.

In 2020, 58 (5.9%) cases of stroke were registered in patients with manifestations of acute COVID infection and 112 (11.5%) cases of stroke in convalescents after COVID.



GBD 2016 Stroke Collaborators. Global, regional, and national burden of stroke, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet Neurol.* 2019 May;18(5):439-458. doi: 10.1016/S1474-4422(19)30034-1. Epub 2019 Mar 11. PMID: 30871944; PMCID: PMC6494974.

Conclusion

1. The incidence of stroke in patients with manifestations of acute COVID infection in Odessa was 5.9%
2. The incidence of stroke in convalescents after COVID was 11.5%.