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### RESEARCH ARTICLE

#### THE IMPACT OF CONFINEMENT AND THE HYGIENIC MEASURES TO CONTAIN COVID-19. THE EPIDEMIOLOGICAL SITUATION IN MOROCCO LIKE EXEMPLE

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#### Abstract

COVID-19 was first reported in 2019 in Wuhan, China and has since spread widely in China and around the world. Human-to-human transmission occurs through contact with infected secretions, primarily through contact with large respiratory droplets. People with COVID-19 infection may have few or no symptoms, although some patients are seriously ill and die. The risk of serious illness and death from COVID-19 infection increases with age. No vaccine, antiviral medication or other specific treatment is available. However, the means of prevention and health isolation constitute the basis in the fight against the spread of COVID-19. According to the evolving monitoring of the epidemic in Morocco, we will illustrate the importance of hygiene and containment measures as well as the state of health emergency decreed throughout the national territory in improving the epidemiological situation, which is characterized by the decline in the number of deaths and the increase in cases of guresons.

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#### Introduction:-

On December 31, 2019, pneumonia case of unknown origin were detected in the city of Wuhan in China, in which a new Coronavirus 2019-nCoV was detected on January 7, 2020.

After China, COIVD-19 infection has spread around the world.

The World Health Organization declared it - Public Health Emergency of international scope - on January 30, 2020, then pandemic on March 11, 2020.

In view of the intensity of the spread of this new virus, each country has started the process of preparing to face it and has developed its national plan for monitoring and responding to COVID-19.

The evolutionary monitoring of the epidemic in Morocco, we will demonstrate the importance of good hygiene and quarantine and or the practice of isolating others in the hope of preventing the spread of contagious diseases, are the most effective tools for containing COVID-19.

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**Materials and Methods:-**

This is a study of the evolutionary follow-up of the epidemiological situation in Morocco in which a total of 844 cases of COVID-19 was recorded between the period from March 02, 2020 until April 03, 2020.

**Results:-**

A total of 844 cases of COVID-19 have been registered in Morocco until 04/03/2020, of which 83.1% are autochthonous cases. The first imported case was detected on 02/03/2020, while the first case of local transmission was registered on March 13, 2020. Faced with the gradual increase in confirmed cases, the confinements measures decided by Morocco were implemented very quickly, consisting of: i) the closure of the land, air and sea borders since March 15, 2020; ii) the end of studies for all school and university levels from March 16, 2020; iii) the stopping of prayers at mosque since March 16, 2020; iv) the prohibition of any gathering of more than 50 people, ordering the closure, at the same time, of public places such as cinemas, museums, cafes and restaurants. A little later, it was decided to close the mosques until further notice.

The authorities carried out a new turn of the screw by deciding on compulsory sanitary confinement. It is no longer allowed to leave the house except to go to work, to the doctor, to the pharmacy.

These measures, the impact of which must be observed within 10 to 14 days of their implementation, have probably enabled a relative slowdown in the spread of the epidemic, from March 29, 2020, to be confirmed in the coming days.

It should be noted that a new, more sensitive, definition of "possible case of COVID-19" was adopted on March 24, 2020 with the aim of early detection of more infected persons. The two peaks recorded on March 23 and 28 are linked to active screening, carried out around two outbreaks of grouped cases, one in people having been on an organized trip to Egypt and the other in Moroccan Jews who participated in a ceremony family. At the same time, screening among nursing staff was organized and coincided with the second peak (graphic 1).

The impact of the border closings probably took place around March 27-28, an effect immediately masked by a local transmission of the disease among their contacts (graphic 2).

The slowdown in the evolution of the epidemic also resulted in the stagnation of the positivity rate since the 12th week (March 16 to 22), while it had an exponential progression between weeks 9 and 11 (graphic 3).

The epidemic dynamics in the 10 days following the notification of the hundredth case in Morocco, compared to other countries, was marked by a slower evolution of the cumulative cases of COVID-19 than in Italy (2500 cases), in Spain (2200 cases), in France (1500 cases) and in Germany (1200 cases). On the other hand, this dynamic was comparable to that observed in Algeria, Tunisia and Egypt (graphic 4).

**Discussion:-**

COVID-19 is an infectious disease caused by a recently discovered coronavirus. The COVID-19 pandemic has infected one million people. The death toll has reached 124,000 worldwide.

According to the pathophysiology, SARS-CoV2 is a new coronavirus identified as the cause of 2019 coronavirus disease (COVID-19) which started in Wuhan, China in late 2019 and has spread around the world. This type of coronavirus responsible for severe respiratory infections is a zoonotic pathogen, which begins in infected animals and is transmitted from animals to humans (1,4,5).

Disease transmission were linked to a live animal market in Wuhan, China, suggesting that the virus was originally transmitted from animals to humans (4). The virus that causes COVID-19 is spread mainly by droplets produced when an infected person coughs, sneezes, or expires. The infection occurs by breathing the virus, if you are near someone who is sick, or by touching a contaminated surface and then your eyes, nose, or mouth.

COVID-19 does not have the same effects depending on the person. The majority of people will only experience mild or moderate symptoms. On average, symptoms appear 5 to 6 days after a person is infected with the virus, but

this can be up to 14 days. The most common symptoms are usually fever, cough and dyspnea. People with mild symptoms and no other health problems should isolate themselves (1,6,8).

The diagnosis is generally made late, because the first manifestations are not very specific and therefore not very alarming. When covid-19 is suspected in a person, quantitative RT-PCR testing of upper and lower respiratory tract secretions confirms SARS-CoV-2 infection. Based on the detection of the genetic code of the new coronavirus, they allow to say that a patient is infected at the time when they are carried out (1,5,7). Samples are taken by swabs in the nose, and provide results within hours. Thus allowing to differentiate covid-19 from other viral disease like influenza virus, parainfluenza, adenovirus, respiratory syncytial virus, rhinovirus, human metapneumovirus, SARS or MERS coronavirus, mycoplasma pneumonia and chlamydia pneumonia.

Therapeutic care. No vaccine, antiviral medication or other specific treatment is available. The treatment of COVID-19 is a supportive treatment. More than 175 treatments and clinical trials of vaccines are currently registered, but data on effective treatment are scarce. Current therapeutic strategies in severe cases include antiviral agents (including remdesivir, in clinical trial), chloroquine derivatives and immunomodulatory agents, such as IL-6 inhibitors such as tocilizumab. For each therapeutic agent, the benefits must be weighed against the possible risks to the patient (1,3,5,8).

The World Health Organization (WHO) has defined basic personal prevention measures against COVID-19, including cleaning your hands and surfaces regularly and avoiding travel when you have a fever or cough (9,10,11). These measures include: washing hands often and stay away from anyone who coughs or sneezes; Do not touching eyes, nose or mouth; Staying at home if feeling unwell; calling to the service concerned by telephone beforehand in case of fever or a respiratory gene; Respecting the indications of the local health authorities; The wearing of a mask is necessary for caregivers and health professionals or for a person close to a proven patient, especially in the event of cohabitation; Social distancing between individuals.

### **Conclusion:-**

The Covid-19 pandemic is an emerging infectious disease with a high level of contagiousness and which proves to be vulnerable to its control by strictly applying measures to prevent transmission, the only way for now, to combat its spread.

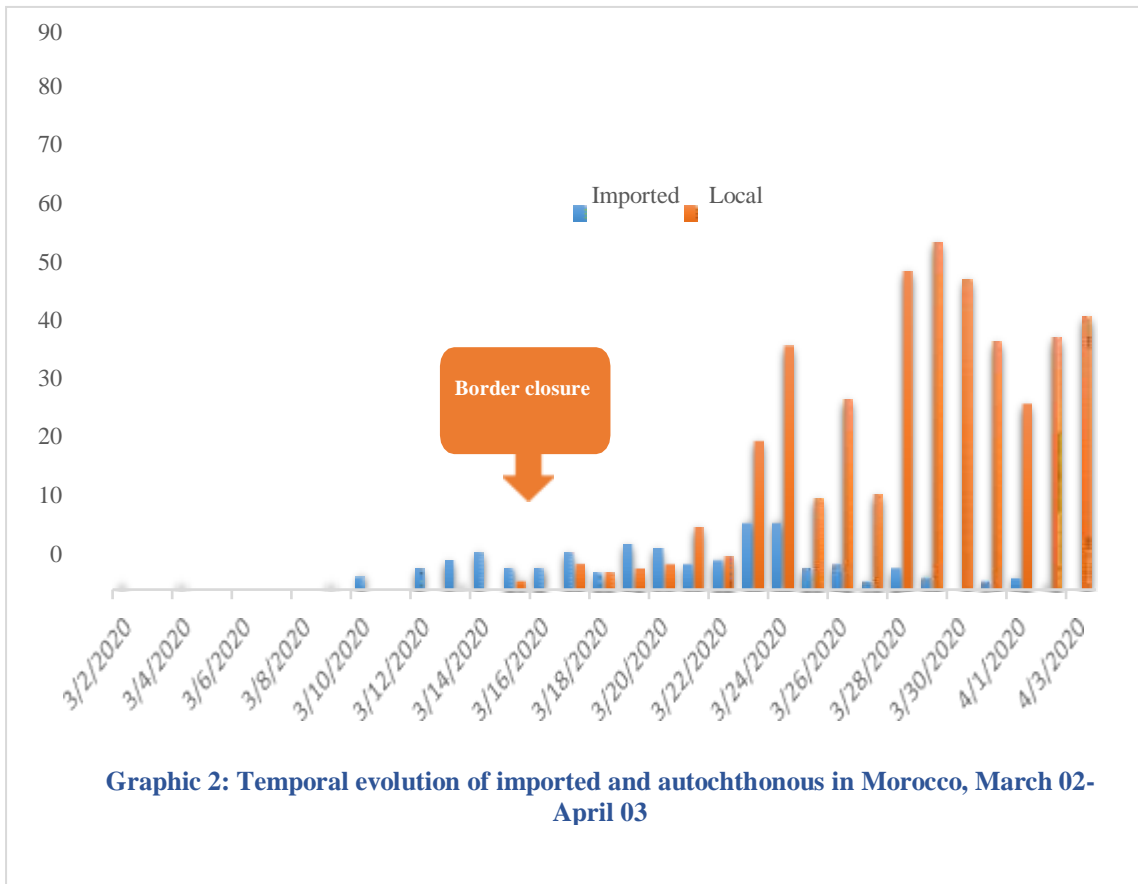
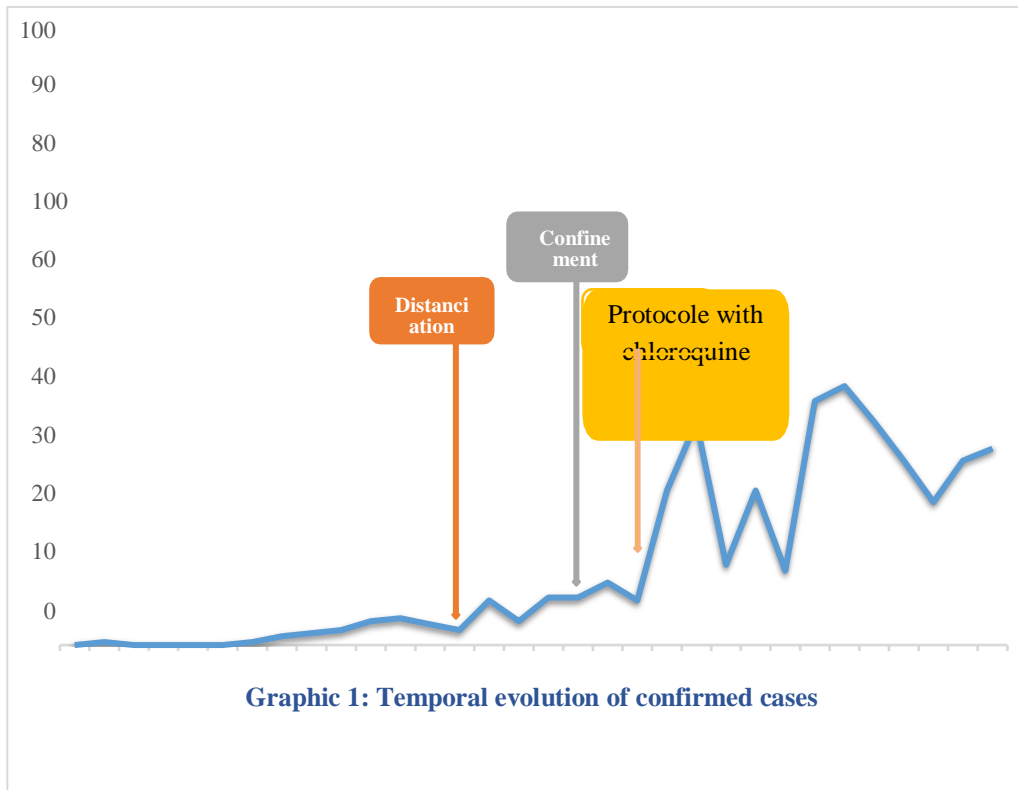
### **Conflicts of interest:**

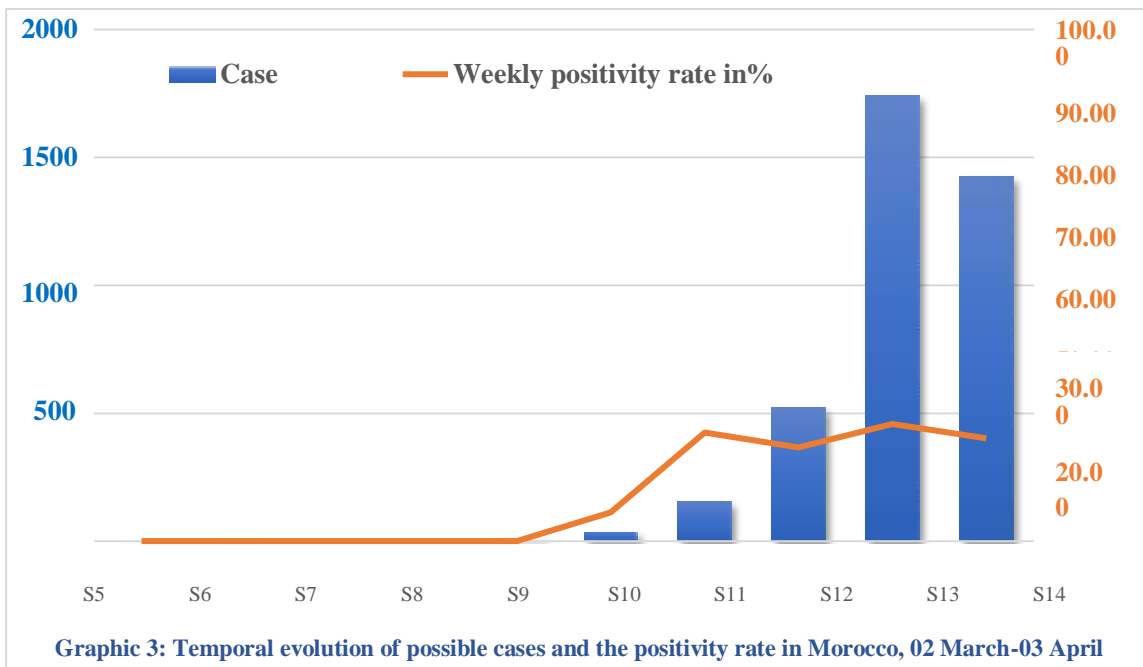
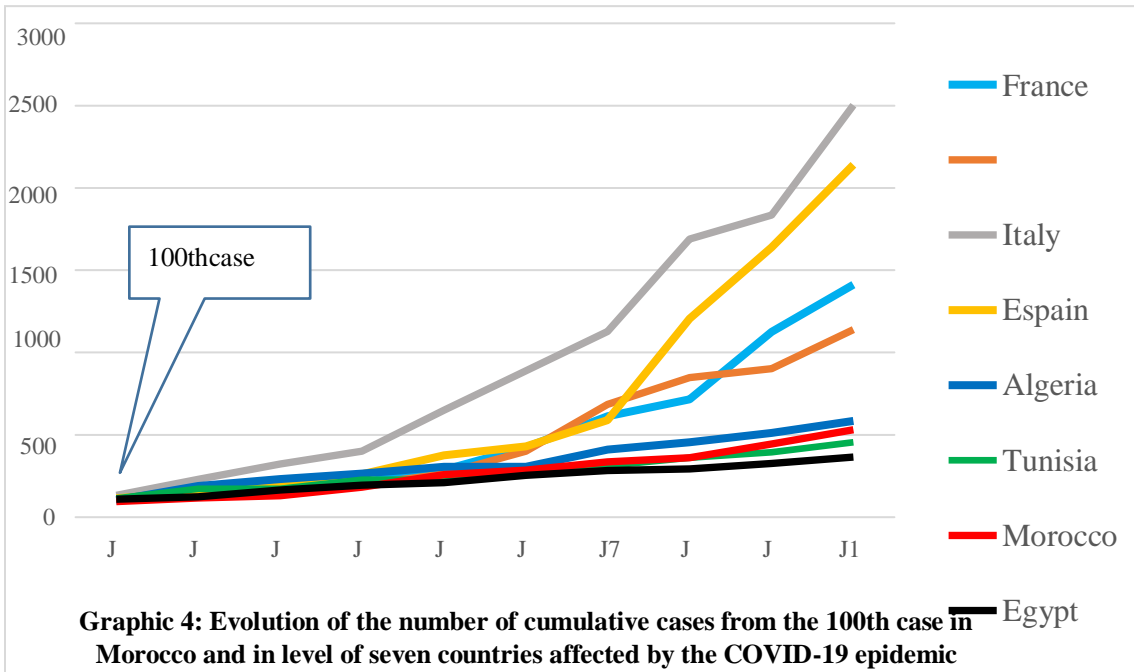
Any conflict of interest.

### **Contributions by authors:**

All authors have read and approved the final version of the manuscript.

**Legend:**





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