THE CORONAVIRUS CRISIS
"Natural infection does not protect against contagion in the face of new variants"

Quarraisha Abdool Karim, scientific director of a South African research center that advises the Government on the coronavirus, advocates "living with covid-19" because he assures that, like the flu, it has come to stay.

Epidemiologist Quarraisha Abdool Karim, Scientific Director of the Center for AIDS Research Program in South Africa.

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Quarraisha Abdool Karim, born 61 years ago in Tongaat, South Africa, is the Scientific Director of the South African Center for AIDS Research (Caprisa) and one of the country’s most renowned epidemiologists. He makes a hole in his schedule - which has become very complicated after the detection of the omicron variant - to hold a telephone conversation from Durban (Kwazulu-Natal). Without abandoning prudence and calm analysis, he assures that South Africa’s experience with HIV is facilitating the country’s adaptation to covid-19. El Caprisa stopped its work with the human immunodeficiency virus in March 2020 - 1,500 people are infected with HIV every day in the country, where there are eight million infected - to focus on covid-19. He is part of the government coronavirus advisory committee that was able to answer the most pressing questions about the behavior of the virus and continues to participate in the Red de Vigilancia del Genoma SA, responsible for the monitoring and evolution of covid-19 in South Africa, the country where the omicron variant that has put the world on alert 11 days ago was detected for the first time at the end of November.

Question. What do you think about the situation created so far by the omicron variant?

Answer. A short time has passed. We are looking at the data. The numbers are rising very fast, especially in Gauteng province, while at the same time increasing in the rest of the regions, especially in Kwazulu-Natal and the Western Cape. Before omicron, we were
below 300 cases - on Friday there were more than 16,000 - and compared to the previous waves, the transmission is significantly higher.

**Q.** Did you expect the virus to mutate into a variant like omicron?

**A.** In South Africa we have good laboratories and good data on our first cases and the evolution in the next waves of the virus. We have been constantly measuring and monitoring. And, with this virus in particular, the evolution has been worse than the previous one after each investigation carried out.

**Q.** In what sense?

**R.** When the virus changes we must observe two things: the transmissibility and the implications in relation to its severity. In addition, we now have vaccines - even though our rate of immunized people is not as high as we would like - and protection from natural infection. For example, we know that those who were infected with the previous variants are catching it again. The natural infection does not protect you with the appearance of new variants.

**Q.** Are current vaccines effective?

**A.** It is too early to say, but we will have answers in the next few weeks. We must follow up between those who are vaccinated and experiencing the disease with mild symptoms, and those who are not and experience a greater severity of the disease.

**Q.** Do you think that the acceleration of the vaccination campaign launched by the South African Government will reduce the impact of omicron?

**A.** The first challenge we had was not having enough doses of the vaccine. But now we are verifying that, as in any new intervention, there is always a group of people who will be [willing to be immunized] before the door opens and another who will take their time to come. The number of infections dropped in September and people became complacent. But omicron has reminded us that we must do it as soon as possible.

**P.** In South Africa it is concerned that only 41% of the adult population is vaccinated.

**R.** We must check who has been left behind in vaccination and why. The Government must focus on the vulnerable population, especially those over 60 years of age, check if we have a sufficient number of protected people, and control those who are infected with HIV - in whom the response is showing that the response has slowed down. There are multiple reasons why people can be in a compromised immune situation.

**Q.** What would you highlight from what you have learned so far with covid-19?

**R.** We learn a lot about humanity in crises, and this is one of the greatest we have experienced, with social and economic impacts. In the face of the challenges that people are facing and uncertainty, some people have resilience and flexibility, but others do not. It is not a different pandemic than the ones I have dealt with. For example, retroviral treatment for HIV was already available in 1996, and millions of infected people still
hesitate to use it. If we think about the covid, which has been with us for only 23 months, the progress made is very positive.

Q. After the increase in the income of minors with the omicron variant, should we vaccinate all ages?

A. Children are vulnerable and typically asymptomatic, but in the beginning we saw that the severity of the virus was concentrated in the elderly. There have been very few serious cases in children. Taking into account the shortage of doses, vaccines should go to those who can pass the disease with severe symptoms.

Q. Should vaccines adapt to the evolution of the virus and its variants?

R. It is necessary to obtain vaccines to prevent, not only to avoid hospitalization. When we do, at that moment, we will know that we have lasting protection. For now, in these 23 months living with the virus, the challenge is how long it will last and what immune responses are there.

Q. Is the information that is being known about omicron surprising you?

A. No. We have followed the evolution of the virus from the first cases and, with the data we have, it is possible to predict that between every 90 and 120 days we will have a new phase of the infection, and that it is very possible that it will arise from the appearance of a new variant. They are the same patterns: the cases go down and, when they go back up, we see some of the previous movements that, quickly, are replaced by the new variant.

Q. In September there was some South African expert who pointed out that the fourth wave would begin on December 3 and with a new variant.

A. What we knew, based on previous research, was that there would be a fourth wave and that it was very likely that it would come with a new variant. We are one of the few countries that does intense molecular surveillance, sequencing the virus without interruption. We are able to identify new sequences very quickly. We know more and more about the functionality of the virus and, when contemplating an alteration, we can anticipate until we know if the disease will be more serious.

Q. Has your understanding of covid-19 behavior increased?

A. In the first investigation conducted in the first quarter of last year, we were learning and did not know what to expect, but now most of us are in our fourth investigation on covid-19. We are no longer new to this, we have experience. When you see a virus with common mutations, which are repeated in previous variants, you can guess where it came from.

Q. From your words, will the evolution of covid-19 be repeated endlessly, with new variants, new cases?

R. We must reach a state of indemnity. We learn to live with the virus and the virus learns to live with us. The flu is a good example. We have known for decades that every year it
can affect us and there is a vaccine. Tuberculosis has been present for more than a century, Ebola is intermittent, with ups and downs... The same will happen with covid. We know that natural immunity is not enough [against contagion] and now, with omicron, that immunity from vaccines is not enough [to prevent infection]. But we are no longer experiencing the devastation of the first wave, in which we had no options or knew what to do. Now we have a treatment, we have learned about the use of oxygen, the times to take into account and the monitoring of patients, we have bioindicators ... We are doing much better.

Q. How have you felt this week as a scientist with the international community’s reaction to criminalizing the South African discovery of omicron?

A. A pandemic makes all of humanity vulnerable. Science and knowledge are a public good that has an impact on populations, that is why we cannot stop sharing them. With the covid-19 we have improved the situation and we have prepared for new waves of the virus thanks to this information. I am not happy with the reaction that there has been and with the bans [flights to South Africa have been suspended from different parts of the planet] because they have been open and transparent, but the data is important and we must continue to provide it. We learned it with HIV: the more we work together, the more we are able to progress and achieve success that everyone benefits from. Scientists bring knowledge to people and the day we forget that we will have lost our way.

Q. In contrast, there has not been global access to vaccines.

A. When vaccines became available, we saw [that] national interests prevailed, and we are paying a price for it. Concern for the new variant reminds us that others will come, and what we do individually is irrelevant, because for humanity to win we must work together, share.