Difäm Health Community (DHC)

Podcast: What we know about OMICRON

As of December 13, 2021

Hello and good afternoon to everybody. We are happy that you join us for this Difäm podcast on Covid-19.

My name is Joel Bremekamp and I am here with my colleague, Ute Papkalla, we are both members of the Difäm health team.

Today we are going to talk about the new variant of concern, the Omicron variant. Since we do not yet have a lot of scientific information about it, it is even more important to look at what is known so far in order to counter false assumptions and concerns. In this podcast, we use information from the World Health Organisation and from different centres for disease control, in short CDC, specifically the African CDC, the European and the American CDC. Now, at the middle of December, none of the peer-reviewed medical journals has published articles on Omicron so far; it seems we have to be patient.

Nevertheless, Ute, let us take a look at what we know so far about Omicron. What makes this variant so special?

Thank you, Joel. You are right. Scientific information is still scarce on Omicron, however, this variant features in all the news. The colleagues from the WHO have declared this variant with the number B.1.1.529, a variant of concern on November 26, 2021, only two days after the South African government informed WHO about the emergence of a new virus variant. However, it did not show up in South Africa first, but rather in Botswana, on November 9. This specimen was then analyzed in South Africa and the South African colleagues alerted the WHO. WHO reacted fast because Omicron carries a large number of mutations compared to other variants such as Alpha or Delta.

Is it unusual that these mutations develop in a virus?

No, not at all. Viruses in general change very quickly and SARS-CoV-2 is no exception. This virus has changed constantly in order to adapt to its environment. Some changes are beneficial to the virus others are counterproductive. The development of mutations is a normal evolutionary process. Obviously, Omicron carries mutations that are beneficial to the replication of the virus. Mutations in the so-called spike protein are particularly significant. This protein is essential for human infection. Moreover, the new virus seems to be even better than Delta in entering and infecting cells. Therefore, the assumption is that it can be more easily transmitted from one person to the next. The fast growing number of persons infected with this variant in South Africa and now in the United Kingdom supports this assumption.

What we do not yet know is whether Omicron's mutations cause more severe disease than for example the Delta variant. We will have to wait for further studies to answer this question. We will let you know once we get new information.

What does that mean for the vaccinations? Will they still be effective?

This is one of our concerns. Most of our vaccines produce antibodies against the spike protein. Therefore, changes in the spike protein may reduce the effectiveness of the vaccines.

Studies on the neutralizing effect of antibodies in the serum of vaccinated individuals conducted in South Africa, Sweden and Germany indicate that the antibody response against the spike protein is highly reduced. Studies conducted by Pfizer and Biontech suggest that a third vaccination with an mRNA vaccine will increase the protective effect of the vaccines. However, we need further peer-reviewed evidence for these findings.

Moreover, let us not forget that these are all lab studies and, even though they are important, we have to observe clinical data. Fortunately, our immune system does not only consist of neutralizing antibodies. Our bodies use multiple layers of protection such as T-cells. Scientists assume that the T-cells for example protect against severe disease even when neutralizing antibodies cannot fully do their job due to the mutated structure of the spike protein.

In addition, we have to observe the real-world clinical data: Are there more breakthrough infections of vaccinated people and do they lead to more

hospitalizations? Which vaccines are more prone to breakthrough infections? After how many shots? There is so much that we do not yet know. These data will come with time.

However, nobody should wait for that, but get vaccinated as soon as possible, as some protection is better than no protection.

Can you detect Omicron through the usual tests?

The widely used PCR tests detect an infection with the Omicron variant the same way as they detect the Delta, Beta or Alpha variant. They look for several specific components of the spike protein. Even if Omicron does not respond to all substances of the molecular test that targets the spike protein components, it will respond to some of them. Several producers of PCR tests have confirmed that their test can detect the Omicron variant as well.

Actually, since the new variant shows a specific difference in its spike protein, this characteristic can be used to identify the variant in a simple way using a common PCR tests. As a gold standard, this would have to be confirmed by sequencing the virus, but in settings where sequencing is rare, the identification of Omicron via a PCR test helps to get a faster overview of the spreading of this variant.

What about rapid tests or even self-administered tests, are they still useful?

Studies are ongoing to determine whether simple antigen tests detect an infection with Omicron. First analyses so far suggest that rapid antigen tests can detect the variant as well. As different rapid tests use different antigens to detect SARS-CoV-2, we will have to wait for a quality check on which rapid tests work and which rapid tests may be less effective.

Is Omicron going to affect us more severely than the Delta variant, which is the most common variant to date?

As we said before, there is still very little knowledge of clinical cases and their outcome. However, Omicron is a Coronavirus and will be able to do the same harm as all the other variants.

In South Africa, we see growing hospitalization rates. At the same time, there are reports, that there are less patients in intensive care. These are early observations in a rather young population. Right now, we cannot say how severe an infection with the Omicron variant will be in older adults and those

with pre-existing diseases. We have to be patient and wait for further scientific information.

However, let me underline, that all variants of Covid-19, including the still dominant Delta variant, can cause severe disease or death. Vaccination and general preventive measures therefore remain the key to winning against the pandemic.

Physical distancing, wearing a facemask, avoiding big gatherings and practicing good hand hygiene are effective in preventing Omicron as well.

We must also continue to convince everybody as fast as possible of the benefits of vaccination. Only if we are all immunized, the virus will not have a chance to mutate as quickly as it does now.

Will the current treatments still be effective?

For the time being we have no reason to suspect that the treatment with Corticosteroids and Interleukin Receptor Blockers will not work when infected with the Omicron variant. In the coming weeks and months, the treatment options will be reviewed. With more patients, we will collect more data.

What can people do?

We all know the preventive measures. The first thing is to get vaccinated. This is crucial: Even if the vaccination does not protect one hundred percent against reinfection, it still protects our lives. It protects us from hospitalization, disabling disease and death. We have good reason to hope that this also applies to Omicron. All other preventive measures like masks, hand hygiene and physical distancing remain valid.

Let me just summarize what we know about Omicron so far.

Omicron is the newest variant of concern that WHO has identified. It was first found in a specimen analyzed in South Africa and we want to congratulate SA for being so diligent to detect and report this variant.

Data are still sparse and therefore we can only say that the Omicron variant seems to be more transmissible than the Delta variant due to its many mutations. Lab tests indicate that Omicron can evade antibodies generated after vaccination. However, more real-world data are needed to clarify what this means for vaccine efficacy and the clinical outcome since the body has

additional immune responses that are also strengthened through vaccination like the T-cells. These questions are the subject of many studies right now.

Consequently, we should be prudent and pay even more attention to protective measures. We should take the vaccine shots as soon as possible; we should wear our masks in crowded settings, keep a certain distance and wash our hands regularly.

We will continue to keep you updated as our team reviews the studies and new information from WHO, the centers for disease control and medical journals.

So be blessed and stay safe!

Sources

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