Is Janssen responsible for the shock?

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ABSTRACT

A 53-year-old male with no known comorbidities presented in emergency department of Trishuli Hospital in shock with 3 days' history of swelling of whole body and 1-day history of difficulty breathing 3 days after receiving the Janssen Ad26.COV2.S vaccine. Nepal on 19th July, 2021 started the inoculation campaign of Johnson and Johnson vaccine, the third COVID-19 shot approved for public use in the country. Twenty-eight cases of cerebral venous sinus thrombi were reported after receiving the Janssen Ad26.COV2.S vaccine, out of which three cases expired.[3] However, no cases of shock post vaccine has been reported till date. The cause of shock in this patient was not clear. The patient could have massive pulmonary embolism leading to shock with the fact that no other septic foci was found in this patient. As there has been rising demand of the vaccine and unmet need, the general public are going to extreme extent. There should be robust public health awareness and follow up post vaccination. The government and health organizations should be focusing more on the post vaccination status of the public, so that we can prevent such adverse events in future.

Keywords: COVID-19, vaccine, shock

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CASE REPORT

A 53-year-old male with no known comorbidities but chronic alcohol consumer (more than 4 standard drink per day) presented in Emergency department of Trishuli Hospital with 3 days' history of swelling of whole body and 1-day history of difficulty breathing 3 days after receiving the Janssen Ad26.COV2.S vaccine. The patient also complained of myalgia, headache and dizziness 1 day after receiving the vaccine. However, he denied having documented fever, burning micturition, chest pain, and cough or bleeding from any sites. On presentation, the patient was sick looking with pulse rate of 110 per min, blood pressure of 70/40 mmHg, Respiratory rate of 24 per minute, saturation of 90 % and temperature of 36.1^0C. The patient's capillary refill time was prolonged and was dehydrated. However, his systemic examination revealed no abnormality. Laboratory and imaging studies demonstrated mild leukocytosis with neutrophilic predominance of 81%. His CRP titer was 10.5 (normal <5). He had severe metabolic acidosis (pH of 6.9) in his arterial blood gas analysis. His ECG showed sinus tachycardia. Besides that, his platelets, renal function test, liver function test, urine microscopic examination and chest x-ray revealed no abnormality. The patient's antigen test for COVID 19 came back positive. The patient was managed immediately in the line of septic shock in Intensive Care Unit. Despite the effort, the patient could not make it and expired after 16 hours of admission. The patient family was asked for permission regarding the autopsy of the case, however the family denied. The urine and blood culture of the patient came out to be sterile after 5 days.

DISCUSSION

On February 27, 2021, the U.S. Food and Drug Administration issued an emergency use authorization (EUA) for the prevention of COVID-19 caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). On April 23, 2021, the FDA amended the EUA to include information about a very rare and serious type of blood clot in people who receive the vaccine. The EUA allows the Janssen COVID-19 Vaccine to be distributed in the U.S. for use in individuals 18 years of age and older.[1]

On July 12, 2021 a shipment of 1.5 million doses of Johnson and Johnson vaccine donated by the United States arrived in Nepal at the time when the country was facing a severe shortage of anti-Covid shots. Nepal on 19th July, 2021 started the inoculation campaign of Johnson and Johnson vaccine, the third COVID-19 shot approved for public use in the country.[2] The single-shot J&J vaccine provided by the US government to Nepal under COVAX facility came as a big relief for the country. The vaccine was the third to become approved for inoculation in the country after Covishield (AstraZeneca) and Vero Cell, and the first that requires only one shot.

Twenty-eight cases of cerebral venous sinus thrombi were reported throughout the globe after receiving the Janssen Ad26.COV2.S vaccine, out of which three cases expired.[3] However, no cases of shock post vaccine has been reported till date. The cause of shock in this patient was not clear. The patient could have massive pulmonary embolism leading to shock with the fact that no other septic foci was found in this patient.

Every patient prior to giving vaccination shot were asked about the signs and symptoms of the COVID-19 and only after it is confirmed that the patient is symptom free become eligible for the jab. The same was done for our patient at the vaccination center, where our patient received the shot. As there has been rising demand of the vaccine and unmet need, the general public are going to extreme extent to receive it and getting benefitted from it, as it is unclear when they will get another one due to the political instability. It can be speculated from the ongoing scenario, that people might go beyond the protocol to just get the shot. It might have happened to our case as well, whether the patient was asymptomatic or could have concealed his symptoms to just get the dose. But nothing as said can be proved.

CONCLUSION

With this case, we must learn to be more vigilant to give and allow vaccinations. We should aware people to be aware of their symptoms of COVID 19 and must explain what could be the consequences of receiving the vaccine while being positive. The patient had had his symptoms just the day after he got the shot but was presented to the health center only after 3 days in shock. There should be robust public health awareness and follow up post vaccination. The government and health organizations should be focusing more on the post vaccination status of the public, so that we can prevent such adverse events in future.

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