

14 May 2021

BRIEF19

A daily review of covid-19 research and policy

RESEARCH BRIEFING

A possible treatment for rare vaccine-induced blood clotting emerges.

The number of individuals who have developed vaccine-induced blood clots and low levels of platelets after receiving the Johnson & Johnson coronavirus vaccine is so miniscule that studying how to treat it will be a challenge. Randomized controlled trials will be nearly impossible. Physicians may be left relying on the weakest form of evidence: case reports.

For the first time, emergency physicians described the successful treatment of what looked to be a serious case of this new entity, which is being called vaccine-induced thrombotic thrombocytopenia (VITT), because the condition causes blood clots (“thrombotic”) and low levels of platelets (“thrombocytopenia”), which are a type of blood cell that helps with proper blood clot formation. The doctors used a blood thinner called bivalirudin. The peer-reviewed report has been pre-published in the [*Annals of Emergency Medicine*](#)*.

When the US Centers for Disease Control and Prevention released guidance on how to treat VITT, the major takeaway for most physicians was *not* to use a commonly used blood thinning medication called heparin. That’s because VITT appears to have similarities with another rare condition called heparin-induced thrombocytopenia. But the CDC did not offer any specific treatment considerations, other than a list of alternatives that physicians already know about. If VITT turns out to be treatable in most cases, the risk-benefit calculation for young people considering the Johnson & Johnson vaccine would change drastically.

In this new case report, the team describes their thought process. Bivalirudin works quickly and its effects do not last long. That means if the treatment appears to be going well, it can be continued on an ongoing basis. But if things appear to be backfiring, the short duration of action means that the effects should wear off promptly.

What is particularly interesting is that the case sounds to have been on the edge of disaster before treatment began. This was a patient who not only developed low platelet counts but had several small blood clots in her lungs and one in her brain that extended into the jugular vein of the neck. In other words, this appears to have been a patient who was facing what could have been life-threatening complications. Either of these clots could have become worse and caused a massive stroke or irreversible damage to the heart and lungs. Instead, the patient improved over several days and was eventually released from the hospital. During a follow-up appointment, her symptoms were gone.

It’s possible that this patient may have had a case of VITT that was destined to *almost* cause her serious problems, but not quite. If so, the bivalirudin would be getting undue credit. But it’s also quite possible that the medication did help. Indeed there are some conditions that doctors treat with one medication or another, but that in reality never needed treatment at all. But right now, given what we know, no clinician diagnosing VITT would simply “observe” the patient. We would all want to provide some kind of blood thinning medication. While this report is basically a very detailed and formal anecdote on the use of bivalirudin for the treatment of VITT, right now, it’s all we’ve got.

—*Jeremy Samuel Faust, MD MS*

*Dr. Faust is a member of the editorial board of the *Annals of Emergency Medicine* and receives a stipend for editing its *News and Perspectives*, which is distinct from the peer-review section of the journal.

POLICY BRIEFING

CDC changes mask guidelines for the vaccinated. What can you do? Everything.

The US Centers for Disease Control and Prevention has announced that fully vaccinated individuals without major health risks such as substantially compromised immune systems can stop wearing masks both outdoors and indoors

A new [infographic](#) makes it all pretty clear. If you are vaccinated, you can do basically anything you could do before the covid-19 pandemic. For unvaccinated people, a three-color scheme remains in effect. The safest activities (“green”) include outdoor exercise and small outdoor gatherings where everyone else is vaccinated. Less safe (“yellow”) activities include dining outdoors with friends from multiple households. The least safe (“red”) includes attending a crowded outdoor event like a parade, live performance, or a sports event. For yellow and red-labeled activities, masks and 6 feet of distance remain recommended. All indoor activities with others remain yellow and red designations for the unvaccinated. Meanwhile all indoor activities for vaccinated persons are green, including singing in a chorus, attending movie theaters, and indoor dining.

These recommendations will certainly lead to increased infections. But the CDC’s read of the data is that vaccinated people won’t be hospitalized or die from these infections. Also, while there is no clinical evidence of this yet, more reports have come out showing that vaccinated persons who have become infected with SARS-CoV-2, are harboring very low amounts of viral genetic material in their noses, implying that contagion among breakthrough cases is unlikely. Barring variants and assuming vaccinations continue to rise, the covid-19 pandemic in the United States may be coming to end soon.

—Jeremy Samuel Faust, MD MS

Uber and Lyft: But for Uber and Lyft you to a vaccine center.

At first, vaccine availability was the problem. Then, as production ramped up and supply increased, the focus moved to removing barriers to access. Accordingly, a national distribution strategy [focusing](#) on dedicated centers embedded in the community was carried out. Once the initial rush for vaccinations ended, the Biden administration sought to financially [incentivize](#) businesses into supporting the effort as the general public became eligible. Now, amidst [slowing](#) rates of inoculation, the White House is focusing on further efforts to increase access and reach the medically-vulnerable. The emphasis: transportation.

With the goal of seventy percent of American adults having received at least one dose of the vaccine by July 4th, President Biden has [announced](#) a new partnership with Uber and Lyft. Beginning May 24, mobile apps for these companies will display the closest vaccination sites and offer a \$15 credit in either direction to offset the cost of traveling to and from one of the centers.

The Centers for Disease Control and Prevention (CDC) has previously [determined](#) that the lack of transportation is a leading barrier for those desiring vaccination. That said, only twenty four percent of individuals over the age of fifty [used](#) a rideshare app as of 2018 (though the numbers likely grew in 2019 and tanked in 2020-2021), and there is significant overlap between this group and the target demographic of the medically-fragile. Still, as the difficulties in reaching herd immunity mount, every effort needs to be made to maximize outreach and vaccine availability. For young and middle-aged adults, a free ride might lower the bar. *Various.*

—Brief19 Policy Team