

## Letter re 'Breakthrough COVID-19 infections among health care workers after two doses of ChAdOx1 nCoV-19 vaccine'

We read with interest article by Niyas et al on-breakthrough infections after COVID vaccine [1]. We wish to congratulate the authors for raising an important topic and we wish to share severe cases of COVID- 19 breakthrough infection after both doses of vaccination.

Case 1: A 55-year-old female, with no comorbidities presented with complaints of fever, breathlessness, and loose stools for 7 days. She had received two doses of COVID vaccine (ChAdOx1 nCoV-19 vaccine) 2 months back. She was tested positive for RT PCR test for COVID-19. At the time of admission to ICU , she was tachypnoeic with respiratory rate of 36/min , and the saturation of 74% on room air. Her inflammatory markers were high and HRCT severity score was 23/25 . She was started on oxygen therapy ,remdesivir and methylprednisolone along with other supportive measures. However, she deteriorated and required ventilatory support due to progressive disease and finally succumbed to illness.

Case 2: A 54 year old hypertensive male who presented with complaints of high grade fever for 1 week and shortness of breath for 3 days. He had completed his COVID 19 vaccination (BBV152) three weeks back. He tested positive for RT PCR for COVID 19. At the time of admission in ICU, he was conscious and had room air saturation of 88% and respiratory rate 34 / minute. He was started on supportive oxygen therapy, remdesivir and methylprednisolone. There was clinical improvement after 6 days of admission and patient was discharged from ICU.

As we are moving ahead with the vaccine drives and virus is mutating, breakthrough infections have been reported worldwide [1-3]. It is the time to report and analyse more such cases to add granularity to our understanding of the post vaccine immunology.

### References

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  3. Hacısuleyman E, Hale C, Saito Y. Vaccine breakthrough infections with SARS-CoV-2 variants. *N Engl J Med.* Apr 21 2021 doi: 10.1056/NEJMoa2105000.