

BRIEF COMMUNICATION

**Three children who recovered from novel coronavirus
2019 pneumonia**

In December 2019, a cluster of acute respiratory illness, now known as novel COVID-19, occurred in Wuhan, Hubei Province, China.^{1–5} The disease rapidly spread from Wuhan to other areas. Previous studies suggest that COVID-19 is more likely to infect older adult men, particularly those with chronic comorbidities.^{6–8} In the isolation ward of the children's hospital affiliated to Zhengzhou University, three children were hospitalised with pneumonia caused by 2019 novel coronavirus (COVID-19). Two were sisters, aged 6 and 8 years old and one was a 6-month-old boy. All three patients had fever, and two had nasal congestion and rhinitis, associated with fatigue, diarrhoea and headache. The 6-year-old girl mainly had cough. None had dyspnoea or cyanosis. Their computerised tomographic scans are shown in Figures 1–3. None of the children required intensive care or mechanical ventilation or had any severe complications.

The time between admission and diagnosis was 2 days. Families of all three children had at least one infected relative, with the children's infection occurring after the parents' infection. The

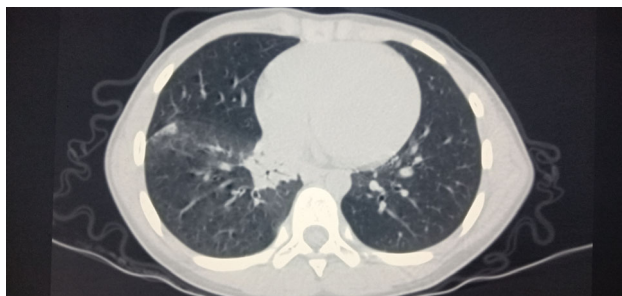


Fig. 1 Computerised tomographic scan of 8-year-old girl.



Fig. 2 Computerised tomographic scan of 6-year-old girl.

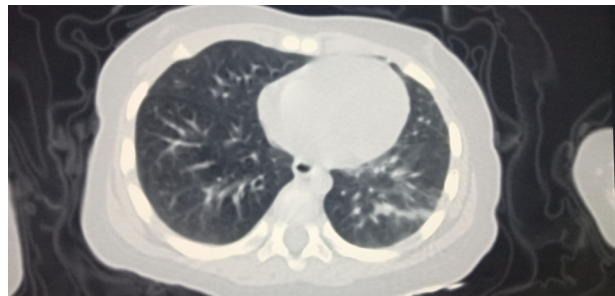


Fig. 3 Computerised tomographic scan of 6-month-old boy.

two sisters had family members who visited Wuhan. The other child had no direct link to Wuhan.

Throat swab, sputum, stool and blood samples were tested for COVID-19 nucleic acid using reverse-transcriptase polymerase chain reaction. All three children are confirmed cases. According to the current conditions of the reported cases, the three children mainly belong to family cluster cases.

The children were closely monitored in hospital. The two sisters, but not the infant, were treated with nebulised interferon- $\alpha 2b$ 100 000 IU/kg, twice daily for 7 days.

The children's fever resolved within 3 days and after 1 week their symptoms improved significantly. The children were discharged after 10 days, when they had two consecutive negative polymerase chain reaction tests of respiratory specimens at least 1 day apart. However, they required home isolation for 14 days after discharge. The girls were given psychological support by nursing staff. Strict infection control measures were instituted, although the 6-month-old needed special isolation because he was unable to wear a mask.

Very few cases have been reported of children infected with COVID-19.^{1–9} The Children's Hospital affiliated to Zhengzhou University is a first-class Children's Hospital in the province. It was designated as one of the regional medical centres by the state in 2019. It is also the designated hospital for medical treatment of children with COVID-19 pneumonia, and is the children's medical centre of Henan Province. At present, the hospital has sent more than medical staff to support Wuhan. The three children were the first children to be managed in Henan Province. Through everybody's effort, careful treatment, psychological nursing support and infection control measures in hospital, these children recovered completely and were discharged safely (Video S1, Supporting Information). Informed consent was obtained from all individual participants included in the study.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Video S1. The three children left the hospital to appear in the media.