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Infection 'can lead to bone loss' in arms, legs

HKU researchers warn long Covid can bring on conditions akin to osteoporosis

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A Covid-19 infection can cause severe inflammatory bone loss in the arms, legs and spine, according to a study by the University of Hong Kong (HKU), with researchers urging long-Covid patients to receive early check-ups.

The findings, based on trials carried out on Syrian hamsters which experience the infection similarly to humans, revealed that the virus could induce conditions akin to osteoporosis, leading to weakened bones and a higher likelihood of fractures, Professor Kelvin Yeung Wai-kiwok from the department of orthopaedics and traumatology said in an interview yesterday.

"Some long-Covid patients have reported symptoms such as pain in their thigh, but others may not notice it until they fall down or have an accident," Yeung said. "If they are worried, they can consult an orthopaedic specialist and have a bone density scan, and get medication to treat the illness." Published in the journal Nature Communications, the study involved infecting the hamsters with the Delta variant through the nose and then collecting bone tissue.

Using technology known as a three-dimensional micro-computerised tomography scan, the HKU research team led by Yeung and Dr Jasper Chan Fuk-woo of the microbiology department, found the infection had progressively led to severe bone loss of 50 per cent in long bones and 20 per cent in lumbar vertebrae.

The researchers also discovered that a coronavirus infection could trigger an inflammatory response resulting in the formation of osteoclasts, a type of cell responsible for bone resorption that breaks down bone tissue.

"The findings indicate that the pathological bone loss may be an important but neglected complication, which warrants more extensive investigation during the long-term follow-up of Covid-19 patients," the researchers said.

Remedies for bone loss included medical treatment, as well as lifestyle changes such as increased outdoor exercise and exposure to sunlight, Yeung said. But drinking more milk might not necessarily improve the condition in patients who already followed a balanced diet and had enough iron, he added.

In Hong Kong, there is no recent estimate showing how many people suffer from long Covid. But after the city's fourth wave of infections last year, studies revealed about 5 per cent of coronavirus patients showed symptoms of the syndrome.

Patients who suffer from long Covid continue to experience the long-term effects of the virus. Problems emerge four or more weeks after being infected, according to overseas health authorities. The condition can last for at least two months.