

# Anti-malaria drug, throat spray found to cut Covid-19 infection risk

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Using a throat spray or consuming the anti-malaria drug hydroxychloroquine has been found to reduce the risk of Covid-19 infection in healthy individuals in areas with high transmission rates.

A local study of more than 3,000 healthy young migrant workers who were quarantined in Tuas South Dormitory in May last year found that taking a povidone-iodine throat spray three times a day or the oral drug hydroxychloroquine once daily reduced the number of those infected by Sars-CoV-2 by more than 20 per cent.

In all, the team of clinician-scientists from the National University Health System (NUHS) studied 3,037 asymptomatic healthy young men with an average age of 33 who produced a negative serology test result indicating no prior exposure to the virus.

These dormitory residents were mostly from India and Bangladesh.

They were split into five groups, each of which was given a different set of medicines for six weeks.

The control group was given vitamin C, the second group zinc and vitamin C, the third the povidone-iodine throat spray, while the fourth received hydroxychloroquine, and the last group received the drug ivermectin. At that time, Covid-19 clusters were still rampant in Singapore's dormitories, and residents were isolated or quarantined in their rooms.

After six weeks, blood samples were collected and analysed for their antibody response to Sars-CoV-2, the virus that causes Covid-19. The researchers found that 70 per cent of those in the vitamin C group had been infected, while 46 per cent of those in the povidone-iodine throat spray

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## Repurposing existing drugs a practical option, says don

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group and 49 per cent of workers in the hydroxychloroquine group were infected with the virus.

None of the workers died or required hospitalisation due to pneumonia – a broader category that covers Covid-19 patients. They had largely adhered to their doses, with an overall medication adherence rate of 80 per cent.

Polymerase chain reaction (PCR) tests were not used in the study due to the scarcity of PCR testing resources at that time.

The NUHS team was led by Associate Professor Raymond Seet, a senior consultant in the division of neurology at the department of medicine in National University Hospital, and in-

cluded infectious diseases experts Paul Tambyah and Alex Cook, as well as Dr Amy Quek and Associate Professor Mikael Hartman. Their findings have been published in the *International Journal of Infectious Diseases*.

Repurposing accessible existing drugs such as povidone-iodine and hydroxychloroquine is a practical way to curb the spread of the virus, especially in regions where Covid-19 is rampant, said Prof Seet.

He added that he, Dr Quek and Prof Hartman were early volunteers in the dormitories, where they ran medical posts and screened residents with infection who might have required hospital care. “At the start of the outbreak, the numbers of dorm infections



The research team – (from left) Professor Paul Tambyah, Associate Professor Raymond Seet, Associate Professor Alex Cook, Dr Amy Quek and Associate Professor Mikael Hartman – found in their study that taking a povidone-iodine throat spray three times a day or the anti-malaria oral drug hydroxychloroquine once daily reduced the number of those infected by Sars-CoV-2 by more than 20 per cent. ST PHOTO: YONG LI XUAN

were simply overwhelming. That was when we got together with Professor Tambyah and Associate Professor Cook to come up with the idea of running a study, all with the overarching aim to help

ease the burden on our healthcare system,” he added.

The throat spray can be bought over the counter at pharmacies while hydroxychloroquine will require a doctor’s prescription.

“Oral hydroxychloroquine or povidone-iodine throat spray are existing drugs that are easily available and have known safety profiles. This can represent a viable preventive strategy for individuals

living in a closed and high-exposure setting, especially in areas and countries where Covid-19 vaccination is not available or widespread,” Prof Seet said.

Still, he cautioned that until mass vaccination is successfully implemented globally, non-pharmacological interventions such as mask-wearing and physical distancing are the only proven measures to mitigate transmission.

Given the short half-life of both medications, individuals are protected from infection only when they take the drugs.

Common side effects of hydroxychloroquine include headaches, dizziness, diarrhoea, stomach cramps and vomiting. These symptoms may be reduced when the tablets are taken with food.

Povidone-iodine may cause local irritation to the mucosa as well as allergic reactions. Individuals with thyroid disorders should consult their doctors before using the throat spray.

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