

One million epilepsy patients in China missing out on beneficial surgery

July 7 2020



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In 2010, Professor Patrick Kwan from Monash University's Department of Neuroscience, led an international team researching the causes and

outcomes of epilepsy in rural China.

A decade later, the results indicate that at least one million Chinese people with epilepsy could be candidates for a standard operation that may leave them seizure-free.

The study, published in *Neurology*, incorporated 600 [epilepsy patients](#) from across four rural provinces in China from July 2010 and December 2012, with each participant undergoing an MRI and other tests looking for abnormalities in brain imaging. Of those, 108 were found to have lesions that could potentially be cured by surgery.

"In a best-case scenario, around 70 percent to 80 percent of them would be seizure-free—often after enduring seizures uncontrolled by medications for 20 years or more," Professor Kwan said.

The participants were assessed by local primary care doctors trained by provincial neurologists in main hospitals to use a standardized questionnaire and take patient histories. The patients then traveled to provincial centers to have tests including MRIs and blood taken, for use in later research into genetic causes for epilepsy.

Professor Kwan said those patients identified as potential surgery candidates would need to undergo further tests including video-EEGs and neuropsychological assessments to ensure surgery would be effective, with the actual operation only taking three to four hours.

The same standard operation is carried out for suitable patients routinely around the world including Australia, UK and US.

"Extrapolating out the study results, potentially at least a million people could benefit from the operation—that's a huge surgical treatment gap," Professor Kwan said. "These findings are significant, highlighting the

magnitude of the unmet needs for epilepsy surgery in China. Hopefully this information demonstrates a quantifiable need. By raising awareness we hope to influence policymakers to provide more resources in [epilepsy](#) care, including proper evaluation in specialist centers and proceeding to [surgery](#) if deemed appropriate."

More information: Indran Davagnanam et al. Prevalence of MRI abnormalities in people with epilepsy in rural China, *Neurology* (2020). [DOI: 10.1212/WNL.00000000000010171](https://doi.org/10.1212/WNL.00000000000010171)

Provided by Monash University

Citation: One million epilepsy patients in China missing out on beneficial surgery (2020, July 7) retrieved 23 November 2023 from <https://medicalxpress.com/news/2020-07-million-epilepsy-patients-china-beneficial.html>

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