Clinical and cost-effectiveness of clopidogrel resistance genotype testing after ischaemic stroke or transient ischaemic attack: a systematic review and economic model

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Plain language summary

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What is the problem?

The most common type of stroke occurs when the supply of blood to the brain is cut off. Symptoms of stroke happen suddenly and vary depending on which part of the brain is affected. They usually include problems with movement, speech, vision and the face drooping on one side. A 'transient ischaemic attack' is a milder related condition. There are around 100,000 strokes and 60,000 transient ischaemic attacks every year in the UK.

People who have a stroke or transient ischaemic attack are at greater risk of having another stroke. To reduce the chances of this happening, doctors will often prescribe medication. The most common medication used is called 'clopidogrel'. However, clopidogrel does not work for everyone. One reason for this is having specific variations of a gene called the *CYP2C19* gene. Around one in three people in the UK have this variation.

What did we do?

We wanted to know whether introducing genetic testing to identify variations in the *CYP2C19* gene for people who have had a stroke or transient ischaemic attack can help doctors prescribe a treatment that will work for them, reducing the risk of having another stroke. We also wanted to know if doing this test would be a good use of NHS money.

What did we find?

Doing a genetic test to identify variations in the *CYP2C19* gene, and prescribing an alternative medication for people with these variations, may reduce the chances of having a new stroke. It is likely that a genetic test for variations of the *CYP2C19* gene would represent value for money for the NHS.

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This article

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