Research suggests 'missed opportunities' to prescribe drugs for stroke prevention

November 15 2016

Micrograph showing cortical pseudolaminar necrosis, a finding seen in strokes on medical imaging and at autopsy. H&E-LFB stain. Credit: Nephron/Wikipedia

An analysis of the records of UK patients who had experienced a stroke has found that over half of those who should get drugs to prevent strokes were not prescribed them.

Across the UK, that amounts to 33% of all stroke and 'mini-stroke'
(transient ischaemic attack, or TIA) patients having a 'missed opportunity' for preventative treatment.

Three types of patients are recommended to have drugs to prevent strokes; patients with high blood pressure, patients who are at high risk of a stroke, and patients with an irregular heartbeat - called atrial fibrillation.

Guidelines recommend that high blood pressure patients should have drugs to lower blood pressure, high risk patients (people with cardiovascular disease (CVD) or at high risk of CVD) should be prescribed a statin, and patients with atrial fibrillation should have drugs to prevent blood clots (anticoagulants). These treatments all reduce the chances of suffering a stroke or a mini-stroke (transient ischaemic attack or TIA). The findings, published in *PLOS Medicine*, suggest that they may be underused.

The researchers, from the University of Birmingham, estimate that approximately 12,000 first strokes could be prevented in the UK each year through optimal prescribing of the drugs.

The team searched electronic medical records from over 500 UK general practices. They identified every patient who suffered a first stroke or a mini-stroke between January 2009 and December 2013.

They then found out how many were known to be at high risk, due to high blood pressure, CVD or high risk of CVD and/or atrial fibrillation before the stroke. They found 29,043 patients with a first stroke or TIA, of whom 17,680 should have been prescribed either drugs to lower blood pressure, a statin, or drugs to prevent blood clots. More than half of those who should were not prescribed the drugs.

At least one prevention drug was not prescribed when clinically indicated
in 54% of stroke/TIA patients:

- 52% of those with atrial fibrillation were not prescribed anticoagulant drugs to prevent blood clots
- 49% of those at high risk were not prescribed lipid lowering statins
- 25% of high blood pressure patients were not prescribed antihypertensive drugs to lower blood pressure

Between 2009 and 2013 there was no significant reduction in the proportion of stroke/TIA patients with prior missed opportunities for prevention with lipid lowering or antihypertensive drugs; though prescribing of anticoagulant drugs improved during this period.

Dr Grace Turner, from the University of Birmingham, explained, "These findings suggest a number of missed opportunities to reduce the incidence of strokes. The next step for us is to build on this exploratory study and investigate the reasons for under-prescribing, with a view to developing an intervention that can help to bridge the gap."

"It's worth noting that there are instances where not prescribing may be the correct approach. For example, there are elderly patients who may be frail and have multiple significant comorbidities who wouldn't be suitable, and there are patients who actively take part in the decision to not prescribe."

A limitation of the study is that it only looks at prescribed drugs. Not all patients prescribed drugs take them and they may not be taking enough to bring their blood pressure under control. If anything this means that more patients are undertreated than this study suggests.

Professor Mel Calvert, Director of the Centre for Patient Reported Outcome Research (CPROR), added, "We're fortunate to have a wealth
of patient data available to us in the UK which, if analysed appropriately, can provide valuable information to inform new guidelines and practices that will improve primary care provision."

Stroke is a leading cause of death and disability; worldwide it is estimated that 16.9 million people have a first stroke each year.


Provided by University of Birmingham


This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.