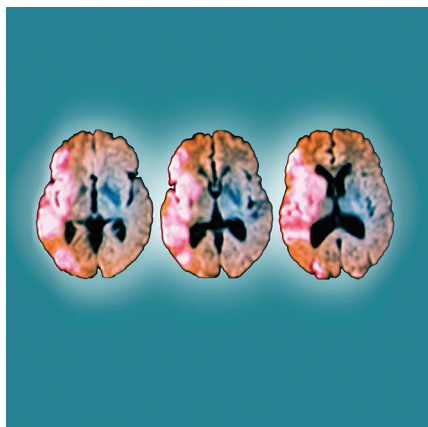


Stroke detection and prevention in atrial fibrillation



IMPORTANCE OF STROKE PREVENTION

Preventing stroke should be one of the most important priorities of any healthcare system. It is a devastating outcome for patients and their families, second only to cancer in terms of what patients most want to avoid.

Managing stroke and its sequelae has huge cost implications for health and social care systems. In this issue of the *BJGP*, three articles deal with the subject of stroke and its better prevention. One important theme is the earlier triage of stroke in patients presenting with symptoms, with the article by Mellor and colleagues showing that UK GP receptionists appear to have good theoretical knowledge of predictive symptoms, but performed a little less well when role players simulating patients with symptoms possibly due to stroke, telephoned practices.¹ However, 69% were advised to call emergency services immediately, with lower urgent dealings for the scenarios that were pre-rated as 'difficult'.

STROKE PREVENTION IN ATRIAL FIBRILLATION

In terms of stroke prevention, alongside detection and management of hypertension and other vascular risks, the most important strategy is the diagnosis and stroke risk stratification and management of atrial fibrillation (AF). Atrial fibrillation is the commonest cardiac arrhythmia, with about 1–2% of the general population estimated to be affected.^{2,3} It is a particularly common disorder in older people, with over 5% aged ≥65 years experiencing AF, and around 10% of people aged ≥75 years,^{4–6} with the

prevalence predicted to rise.⁷ However it is the associated stroke risk that makes atrial fibrillation important, not its arrhythmia effects.

Patients with AF are at an almost fivefold higher risk of stroke compared to age-matched individuals with normal sinus rhythm,⁸ as well as at a twice as high risk of all-cause mortality and heart failure. About 20% of all ischaemic strokes are attributable to embolism as a result of AF.⁹ Not only do patients with AF have more strokes, they also develop more recurrent strokes and more severe strokes, regardless of age.¹⁰ Following a stroke, patients with AF are more likely to be left with long-term disability and require long-term care.^{11,12}

MANAGEMENT GUIDELINES FOR STROKE PREVENTION

Fortunately, there are very effective treatment options to significantly attenuate this AF stroke risk, with recent guideline updates in the US, Europe, and the UK converging over the evidence guiding their recommendations. However, repeated audits in these same countries show much under-diagnosis of AF and under-management of stroke risk, despite the huge evidence base. Most variation occurs in general practice, where there is often less understanding of the evidence base, or differing perceptions on the generalisability of the evidence base compared to specialists, or greater concerns over risks of treatments than of benefits.

The European Primary Care Cardiovascular Society (EPCCS) considered that the largely specialist developed guidelines would benefit from contextual changes or clarifications of the evidence to aid the uptake of guidance in European primary care. An EPCCS Consensus Group made its recommendations based on 'the trade-off between the benefits and harms of any intervention, taking into account the quality of the underpinning evidence' as cited by the National Institute for Health and Care Excellence (NICE) in their grading of

evidence. The wording used in the EPCCS recommendations, recently published in the *European Journal of Preventive Cardiology*,¹³ denotes the certainty with which the statements are made. They also stress the importance of discussion with the patient about the risks and benefits of the interventions, and critically their values and preferences.

NEW RESEARCH IN STROKE

There are two research articles in this issue of the *BJGP* that deal with this under-researched area of practice in relation to anticoagulant monitoring, and should guide future guideline iterations. Both articles by Ward and colleagues^{14,15} deal with self-monitoring of international normalised ratio (INR) based on follow-up of all the patients purchasing point-of-care INR machines in the UK over a 12-month period. There are a few surprises: the number is low (only 299 people) and a tiny proportion of those are on a vitamin K antagonist requiring monitoring, but then the machine reader is expensive. Around half were self-managing as well as self-monitoring, and yet only 46% had received personal training (relying instead on the machine information leaflets), and training was less likely (15%) if the patient was new to self-monitoring. However, INR control was high (mean time in therapeutic range >75%) and persistence high (>90%) at 12 months. Testing intervals were rather frequent (mean 11 days) and quality assurance done rather infrequently, which further suggests the need for more training and formal dosing decision support (rarely provided).¹⁴ Further, less testing may justify the NHS paying for INR readers.

EPCCS STROKE PREVENTION ON ATRIAL FIBRILLATION GUIDANCE

Returning to the EPCCS Stroke Prevention on Atrial Fibrillation practical guidance article,¹³ this covers six areas including:

- how to identify patients with atrial fibrillation;

"Preventing stroke should be one of the most important priorities of any healthcare system."

“New evidence, reliable synthesis of the data, and practical implications of subsequent guidance all need a focus on stroke given its importance to health funders and the general public.”

- how to determine their stroke risk and whether to recommend modification of this risk; and
- what management options are available, with practical recommendations on maximising benefit and minimising risk if anticoagulation is recommended and the reasons why antiplatelet therapy is no longer recommended.

The summary evidence is presented for each area and simple summary recommendations are highlighted, with areas of remaining uncertainty listed.

A 20-page coloured monograph of the full guidance is available on the EPCCS website (<http://www.epccs.eu/d/442/epccs-consensus-guidance-on-stroke-prevention-in-atrial-fibrillation-spaf-in-primary-care>; login required). It highlights the summary recommendations and indicates where the position taken is clearly evidence-based (green), and where it is more inferred and consensus-based (blue). It is also specified when studies were carried out in primary care settings, and therefore where the evidence is most relevant for GPs.

There are a few areas where the guidance departs somewhat from specialist guidance, especially in relation to screening for AF and the relative benefits and risks of treating people with moderate AF stroke risk (CHA₂DS₂-VASc score of 1), but mainly the guidance helps to ‘translate’ how to implement the evidence in routine practice.

Importantly, the competing interests of the EPCCS and the contributors are fully stated. However, in these times when any commercial association is deemed by some to entirely negate any expressed opinion, the EPCCS was careful to ensure that many of the contributors had no competing interests at all. This ensured vigorous debate on the limitations and implications of many studies and their relative weight in the final recommendations: the nihilist view was expressed as strongly as the interventionist view.

Atrial fibrillation-related stroke is a very

major public health priority for most health systems. This practical guidance can assist generalist community physicians to translate and implement the large evidence base for this major cause of preventable stroke. The research gaps continue to be filled, as the three articles in this issue illustrate. New evidence, reliable synthesis of the data, and practical implications of subsequent guidance all need a focus on stroke given its importance to health funders and the general public.

REFERENCES

1. Mellor RM, Sheppard JP, Bates E, *et al*. Receptionist rECognition and rEferal of Patients with Stroke (RECEPTS): unannounced simulated patient telephone call study in primary care. *Br J Gen Pract* 2015; DOI: 10.3399/bjgp15X685621.
2. Camm AJ, Kirchhof P, Lip GY, *et al*. Guidelines for the management of atrial fibrillation: the Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC). *Eur Heart J* 2010; **31**: 2369–2429.
3. Camm AJ, Lip GY, De Caterina R, *et al*. 2012 focused update of the ESC Guidelines for the management of atrial fibrillation: an update of the 2010 ESC Guidelines for the management of atrial fibrillation. Developed with the special contribution of the European Heart Rhythm Association. *Eur Heart J* 2012; **33**: 2719–2747.
4. Hobbs FD, Fitzmaurice DA, Mant J, *et al*. A randomised controlled trial and cost-effectiveness study of systematic screening (targeted and total population screening) versus routine practice for the detection of atrial fibrillation in people aged 65 and over. The SAFE study. *Health Technol Assess* 2005; **9**: iii–iv, ix–x, 1–74.
5. Heeringa J, van der Kuip DA, Hofman A, *et al*. Prevalence, incidence and lifetime risk of atrial fibrillation: the Rotterdam study. *Eur Heart J* 2006; **27**: 949–953.
6. Fuster V, Ryden LE, Cannom DS, *et al*. 2011 ACCF/AHA/HRS focused updates incorporated into the ACC/AHA/ESC 2006 guidelines for the management of patients with atrial fibrillation: a report of the American College of Cardiology Foundation/American Heart Association Task Force on practice guidelines. *Circulation* 2011; **123**(10): e269–367.
7. Friberg J, Buch P, Scharling H, *et al*. Rising rates of hospital admissions for atrial fibrillation. *Epidemiology* 2003; **14**: 666–672.
8. Wolf PA, Abbott RD, Kannel WB. Atrial fibrillation as an independent risk factor for stroke: the Framingham Study. *Stroke* 1991; **22**(8): 983–988.
9. Albers GW, Amarenco P, Easton JD, *et al*. Antithrombotic and thrombolytic therapy for ischemic stroke: the Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy. *Chest* 2004; **126**(3 Suppl): 483S–512S.
10. Jorgensen HS, Nakayama H, Reith J, *et al*. Acute stroke with atrial fibrillation. The Copenhagen Stroke Study. *Stroke* 1996; **27**(10): 1765–1769.
11. Lin HJ, Wolf PA, Kelly-Hayes M, *et al*. Stroke severity in atrial fibrillation. The Framingham Study. *Stroke* 1996; **27**(10): 1760–1764.
12. Lamassa M, Di Carlo A, Pracucci G, *et al*. Characteristics, outcome, and care of stroke associated with atrial fibrillation in Europe: data from a multicenter multinational hospital-based registry (The European Community Stroke Project). *Stroke* 2001; **32**(2): 392–398.
13. Hobbs FR, Taylor CJ, Jan Geersing D, *et al*; On behalf of The European Primary Care Cardiovascular Society (EPCCS) SPAF Working Group. European Primary Care Cardiovascular Society (EPCCS) Consensus Guidance On Stroke Prevention In Atrial Fibrillation (SPAF) In Primary Care. *Eur J Prev Cardiol* 2015; Pii: 2047487315571890. [Epub Ahead Of Print]
14. Ward A, Tompson A, Fitzmaurice D, *et al*. Cohort study of Anticoagulation Self-Monitoring (CASM): a prospective study of its effectiveness in the community. *Br J Gen Pract* 2015; DOI: 10.3399/bjgp15X685633.
15. Tompson A, Heneghan C, Fitzmaurice D, *et al*. Supporting patients to self-monitor their oral anticoagulation therapy: recommendations based on a qualitative study of patients’ experiences. *Br J Gen Pract* 2015; DOI: 10.3399/bjgp15X685645.

ADDRESS FOR CORRESPONDENCE

FD Richard Hobbs

University of Oxford, Nuffield Department of Primary Care Health Sciences New Radcliffe House, 2nd floor, Walton Street, Jericho, Oxford OX2 6NW, UK.
E-mail: richard.hobbs@phc.ox.ac.uk

FD Richard Hobbs,

Head of Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford and NIHR Senior Investigator & Director, NIHR School for Primary Care Research, London.

Funding

FD Richard Hobbs is part supported by the NICR SPCR, NIHR Oxford BRC, and the NIHR Oxford CLAHRC.

Provenance

Freely submitted; not externally peer reviewed.

DOI: 10.3399/bjgp15X685513