key points

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Stroke is the most debilitating complication of atrial fibrillation (AF). AF-related strokes account for 20-25% of all strokes and are generally more severe and disabling and more likely to recur. Oral anticoagulation (OAC) remains the cornerstone of AF management with a clear prognostic benefit. It reduces stroke risk by two-thirds and mortality by a quarter.

The CHA_2DS_2-VASc score is the stroke risk assessment tool recommended by the European Society of Cardiology (ESC) and NICE. The acceptable threshold for OAC is a stroke event rate of 1% per year. The decision to anticoagulate is taken irrespective of the pattern and duration of AF (paroxysmal, persistent or permanent). A large evidence base supports the use of OAC in men with a CHA_2DS_2-VASc score ≥ 2 and women with a score ≥ 3. Hence, in the absence of absolute contraindications, OAC is strongly recommended. The net clinical benefit is less clear in men with a CHA_2DS_2-VASc score of 1 or women with a score of 2.

There is no specific or perceived bleeding risk at which anticoagulation should be withheld. Physicians should focus on identifying and addressing modifiable risk factors in order to mitigate the bleeding risk and allow for safe initiation of OAC. A common misconception is that elderly patients with falls have a contraindication for anticoagulation. In fact, as age is a strong independent risk factor for stroke, elderly patients derive the greatest benefit from OAC and more than 295 falls in a year are required before the risk outweighs the benefit of OAC. Only warfarin and heparin are licensed in valvular AF.

A large meta-analysis showed that direct oral anticoagulants (DOACs) offer an additional 10% reduction in all-cause mortality and a 19% reduction in stroke and systemic embolism. The stroke reduction was largely driven by a reduction in haemorrhagic strokes. No difference in efficacy and bleeding rates was observed between different classes (direct thrombin inhibitors vs factor X inhibitors) and different dosing regimens (once vs twice daily). The ESC now recommends a DOAC over warfarin as first-line treatment in primary and secondary stroke prevention. They are expensive but cost effective. Antiplatelet therapy is no longer recommended for stroke prevention in AF. For those who have contraindications to OAC or have had a stroke despite being on OAC, mechanical isolation of the left atrial appendage is an alternative stroke prevention strategy.

As many patients are asymptomatic, screening to detect AF is vital to facilitate early detection and instigation of treatment. Current guidelines recommend an opportunistic combination of pulse palpation and single lead ECG in those ≥ 65. The emergence of extended ECG monitoring technologies and especially wearable technology within commercially available devices such as smart watches has great potential.