Stroke prevention is the primary goal of therapy in patients with atrial fibrillation (AF). Heart has published numerous papers on early AF detection, approaches for restoring normal sinus rhythm, risk scores for determining which AF patients benefit most from anti-thrombotic therapy, and transcatheter occlusion of the left atrial appendage (LAA) to prevent thrombus formation. Early studies of LAA occlusion compared this procedure to vitamin K antagonist (VKA) therapy for stroke prevention. Now, direct oral anticoagulants (DOACs) have replaced VKA therapy in many AF patients due to an improved risk/benefit profile, among other advantages, but LAA occlusion has not been compared to DOAC therapy.

In this issue of Heart, Sahay and colleagues (see page 139) performed a network meta-analysis of the efficacy and safety of LAA occlusion compared to medical therapy based on 19 randomized trials (including over 87 thousand patients) that compared VKA with placebo, anti-platelet therapy (APT) or a DOAC. Outcomes in 2 major trials of LAA occlusion then were indirectly compared to the network meta-analysis of medical therapy, using VKA therapy as the reference standard (figure 1). The authors conclude that LAA occlusion is more beneficial than placebo or APT and similar in efficacy to DOAC therapy.

In the accompanying editorial, Mazurek and Lip (see page 93) provide a detailed table summarizing the 2 major randomized trials of LAA closure. They also point out that although 90% of atrial thrombi are located in the LAA, there also is evidence to support the concept that “AF is a systemic disease and thrombogenesis in AF is also multifactorial, including all aspects of Virchow’s triad, that is, endothelial or endocardial damage/dysfunction, abnormal blood stasis (not limited to LAA only) as well as abnormal haemostasis, platelet function and fibrinolysis”. Clearly, LAA occlusion will not mitigate this systemic process and also will not prevent stroke related to vascular disease. For those interested in reading further, a recent review article in Heart by Akoum provides an in-depth discussion of the relationships between AF, atrial fibrosis and stroke.

Timely reperfusion with primary percutaneous coronary intervention (PPCI) is the standard of care for acute ST elevation myocardial infarction (STEMI). Varcoe and colleagues (see page 117) hypothesized that the time from the initial patient call to therapeutic intervention of the culprit coronary artery (CTB) provides a better performance measure for a reperfusion service than the time interval after the patient arrives at the medical center, e.g. “door to balloon time” (DTB). Using the British Cardiovascular Intervention Society (BCIS) database of over 16 thousand patients with STEMI treated with PPCI in 2011, the median CTB time was 111 minutes with a DTB time of 41 minutes. Factors that increased the CTB time including out-of-hours call times...
treatment delays, determine where they
ual PPCI centres continuously audit their
centre volume and DTB times. (see page 91) suggest that “available data do not support a superior safety of biodegradable-polymer drug-eluting stents (DESS) in comparison with new-
geneneration durable-polymer DESSs”. They
also point out that “the present report
highlights once more that the clinical and
angiographic determinants of DES failure
remain identical irrespectively of stent
platforms.”

The Education in Heart article in this
issue (see page 159) provides a concise
and practical approach for managing
cardiac emergencies in pregnancy. Flow
charts are provided for management of
pregnant women with acute heart failure,
supraventricular tachycardia, ventricular
tachycardia, acute myocardial infarction,
mechanical valve thrombosis, and aortic
dissection figure 4. These algorithms
might serve as a starting point for more
detailed institution-specific checklists and
protocols.

The Image Challenge case (see page
153) shows a right atrial mass on cardio-
vascular MRI as well as histology after
resection of the mass. I was surprised by
the final diagnosis; perhaps you will be
too.

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