New Developments in Atrial Fibrillation

Atrial Fibrillation (AF) has assumed increasing importance as the global demographic tide results in a rapidly growing population of elderly individuals. Since the turn of the decade in 2010, the biological mechanisms and symptoms of AF have been established in the larger medical community. As such, focus within the field of AF has turned towards treatment. With constantly evolving technology and increased growth in biomedical engineering and cardiac electrophysiology, there have been two major developments in AF treatment and stroke prevention: the novel oral anticoagulant (NOAC) and the left atrial appendage closure (LAAC) device. In this literature review, 11 articles published to PubMed in the past six years were examined and analyzed to determine the current state of LAACs, NOACs, and Warfarin or Vitamin K oral anticoagulants for stroke prevention in AF. The articles discussed various trials and compared the treatments’ efficacy, patient risk, and cost effectiveness. NOACs and LAAC both proved to be noninferior to warfarin for stroke prevention in patients with AF, with both showing a statistically significant reduction in stroke and embolic events (efficacy) and mortality and adverse bleeding events (patient risk) when compared to warfarin. Furthermore, LAAC was shown to have the highest cost-effectiveness over time, but the steepest up-front cost and all NOACs cost more than warfarin per prescription. As such, both treatments require additional time to mature, not only as treatments, but as products in which patients who need the benefits can receive them, no matter their geographic or socioeconomic status.