



Circulation: Arrhythmia and Electrophysiology

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Group Authorship	None of the authors are group authors or consortia.
Abstract	Background: The left atrial appendage (LAA) has been regarded as an important source of cardiac thrombus formation and appears important in the contribution to thrombo-embolism in patients with atrial fibrillation (AF). Our aim was to evaluate the relationship between LAA morphology and previous stroke and/or transient ischemic attack (TIA) in two large and distinct patient cohorts with and without known AF. Methods: The study population consisted of patients with and without drug-refractory AF who underwent computed tomography (CT) prior to transcatheter AF ablation, or clinically indicated for suspected coronary artery disease (CAD). The CT data were used for volumetric assessment of the left atrium (LA) and LAA and to determine LAA morphology. The LAA was classified by 3 readers in consensus as chicken wing, swan, cauliflower or windsock, based on predefined morphology classification criteria. Results: In total, 1813 patients (mean age 59 ± 11 years, 42% female) who underwent CT were included in this analysis (908 patients with AF and 905 patients without AF). Swan LAA morphology was independently associated with prior stroke/TIA in the overall study population (OR 3.40, $P < 0.001$), and in patients with (OR 2.88, $P = 0.012$) and without AF (OR 3.96, $P = 0.011$). Conclusions: Swan morphology of the LAA is independently associated with prior stroke and/or TIA in patients with known AF, as well as in patients not previously diagnosed with AF.
Subject Terms	Atrial Fibrillation; Computerized Tomography (CT); Cerebrovascular Disease/Stroke; Ischemic Stroke; Transient Ischemic Attack (TIA)
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