

Morphologic characteristics of the left atrial appendage, roof, and septum: implications for the ablation of atrial fibrillation

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摘要

Abstract

INTRODUCTION: The left atrium (LA) ablation in different regions, including LA appendage (LAA), LA roof, and LA septum, has recently been proposed to improve the success rate of treating patients with atrial fibrillation (AF). The purpose of this study was to investigate the anatomy of LAA, LA roof, and LA septum, using computed tomography (CT). **METHODS AND RESULTS:** Multidetector CT scan was used to depict the LA in 47 patients with drug-refractory paroxysmal AF (39 males, age = 50 +/- 12 years) and 49 control subjects (34 males, age = 54 +/- 11 years). The area of LAA orifice, neck, and the length of roof line were greater in AF group than in control subjects. Three types of LAA locations and two types of LAA ridges were observed. Higher incidence of inferior LAA was noted in AF patients. The different morphologies of LA roof were described. Roof pouches were revealed in 15% of AF and 14% of controls. Moreover, we found septal ridge in 32% of AF and 23% of controls. **CONCLUSIONS:** Considerable variations of LAA and LA roof morphologies were demonstrated. Peculiar structures, including roof pouches and septal ridges, were delineated by CT imaging. These findings were important for determining the strategy of AF ablation and avoiding the procedure-related complications.