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心房颤动患者肺静脉口解剖形态学: CT二维及三维重建研究 [点此查看全文](#)

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摘要:

目的:应用CT二维平面及三维立体重建的方法描述并测量心房颤动患者肺静脉口解剖形态学。方法:30例在三维标测技术下行肺静脉前庭线性消融术治疗心房颤动的患者,术前应用CT进行心脏扫描,二维平面及三维立体重建后描述肺静脉口形态学特点并测量数据。结果:二维平面下水平位、冠状位、矢状位测量肺静脉口径线为:左上肺静脉(16.90 ± 4.79)、(21.37 ± 4.23)、(22.41 ± 3.96) mm, 左下肺静脉(13.50 ± 3.9)、(15.84 ± 3.22)、(16.82 ± 3.63) mm, 右上肺静脉(17.77 ± 4.69)、(19.11 ± 4.10)、(19.71 ± 4.33) mm, 右下肺静脉(15.33 ± 3.88)、(16.20 ± 4.00)、(17.10 ± 4.24) mm。三维重建腔内测量肺静脉口最大径、最小径为:左上肺静脉(24.30 ± 4.54)、(17.76 ± 4.24) mm, 左下肺静脉(19.10 ± 4.45)、(12.27 ± 3.52) mm, 右上肺静脉(22.99 ± 5.04)、(16.19 ± 4.87) mm, 右下肺静脉(18.63 ± 4.60)、(14.46 ± 3.48) mm。二维测量中所有上肺静脉径线均大于对应的下肺静脉径线($P < 0.01$);三维测量中除右上、下肺静脉最小径间无统计学差异外,其余上肺静脉径线均大于对应的下肺静脉径线($P < 0.01$)。结论:CT三维重建图像可真实反映肺静脉口解剖结构,可作为心脏介入相关手术术前了解肺静脉口的方法之一;肺静脉口结构变异性大,相关手术术前须充分认识。

关键词: [肺静脉](#) [CT](#) [解剖学](#) [心房颤动](#)

Anatomic morphology of pulmonary vein ostium in patients with atrial fibrillation: CT 2-D and 3-D reconstruction [Download Fulltext](#)

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Fund Project:

Abstract:

Objective: To characterize the anatomic morphology of pulmonary vein ostium by 2-D and 3-D computed tomography angiography. **Methods:** Thirty patients with paroxysmal/persistent atrial fibrillation (AF) undergoing computed tomography angiography before catheter ablation of AF were analyzed for the anatomic morphology of pulmonary vein ostium in 2-D and 3-D manner. **Results:** The diameter in axial, coronal and sagittal views of diameters of the pulmonary veins ostium (PVs) were (16.90 ± 4.79) mm, (21.37 ± 4.23) mm, (22.41 ± 3.96) mm in the left superior pulmonary vein (LSPV), (13.50 ± 3.99) mm, (15.84 ± 3.22) mm, (16.82 ± 3.63) mm in the left inferior pulmonary vein (LIPV), (17.77 ± 4.69) mm, (19.11 ± 4.10) mm, (19.71 ± 4.33) mm in the right superior pulmonary vein (RSPV), and (15.33 ± 3.88) mm, (16.20 ± 4.00) mm, (17.10 ± 4.24) mm in the right inferior pulmonary vein (RIPV). The maximal and minimal diameters (d_{max} and d_{min}) of PVs in 3-D view were (24.30 ± 4.54) mm, (17.76 ± 4.24) mm in LSPV, (19.10 ± 4.45) mm, (12.27 ± 3.52) mm in LIPV, (22.99 ± 5.04) mm, (16.19 ± 4.87) mm in RSPV, and (18.63 ± 4.60) mm, (14.46 ± 3.48) mm in RIPV. There is difference of diameters between SPVs and IPVs ($P < 0.01$) in two-dimensional and three-dimensional view except for RIPV. **Conclusion:** CT imaging can present precise 3-D reconstruction of the pulmonary vein ostium, allowing for understanding the details before catheter ablation. There is great variance in the dimension of the pulmonary vein ostium among individuals, which should be taken into consideration before operation.

Keywords: [pulmonary veins](#) [computed tomography](#) [anatomy](#) [atrial fibrillation](#)

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