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### 心房颤动患者心房组织醛固酮水平与心房结构重构的相关性研究 [点此下载全文](#)

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#### 摘要:

目的: 探讨心房颤动患者心房组织醛固酮水平和心房结构重构的相关性。方法: 入选进行人工心脏瓣膜置换术的风湿性心脏病患者25例, 其中窦性心律者12例, 慢性心房颤动者13例(房颤时间 $\geq 6$ 个月)。上述患者均于手术时取左右心房侧壁组织(窦性心律: 右房标本=12, 左房标本=7; 房颤心律: 右房标本=13, 左房标本=8), 用放射免疫法测定心房组织醛固酮水平; 用免疫组织化学法对I型胶原和III型胶原容量分数(CVF-I, CVF-III)进行半定量分析; 用VG染色法对总胶原容量分数(CVF)进行半定量分析。结果: 与窦性心律组比较, 心房颤动组左房内径显著扩大( $P < 0.01$ )。心房组织醛固酮、CVF-I、CVF-I/CVF-III比值及CVF均明显增加( $P < 0.01$ ); 两组CVF-III无差异; 上述指标在左右心房之间无差异; CVF-I与左心房直径( $r=0.856, P < 0.001$ )、CVF-I/CVF-III比值与心房颤动时间( $r=0.766, P < 0.01$ )、CVF与左心房直径( $r=0.845, P < 0.001$ )均显著正相关; 心房组织醛固酮水平与左心房内径( $r=0.814, P < 0.001$ )和CVF( $r=0.885, P < 0.001$ )呈明显正相关。结论: 心房组织醛固酮水平在心房颤动心房结构重构中起重要作用, 并可能参与了心房颤动的发生和维持。

**关键词:** [心房颤动](#) [醛固酮](#) [心房重构](#) [胶原](#)

**Correlation between atrial tissue aldosterone level and atrial extracellular matrix remodeling in patients with atrial fibrillation** [Download Fulltext](#)

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#### Fund Project:

#### Abstract:

**Objective:** To investigate the correlation between atrial tissue aldosterone level and atrial extracellular matrix remodeling in patients with atrial fibrillation and to evaluate the effects of aldosterone on the progress of atrial structural remodeling. **Methods:** Twenty-five patients with rheumatic heart valve disease (12 with sinus rhythm, 13 with chronic atrial fibrillation for  $\geq 6$  months) were included in the present study. The right and left atrial lateral wall tissue samples (12 right and 7 left atrial samples in patients with sinus rhythm; 13 right and 8 left atrial samples in patients with atrial fibrillation) were obtained during mitral/aortic valve replacement operation. Radioimmunoassay was used to determine aldosterone level in local atria. Type I or III collagen volume fraction (CVF-I or CVF-III) and total collagen volume fraction (CVF) were analyzed by immunohistochemistry and VG staining, respectively. **Results:** The left atrial diameters increased markedly in the atrial fibrillation group as compared to those in the sinus rhythm group ( $P < 0.01$ ). Aldosterone level, CVF-I, CVF-I/CVF-III ratio, and total CVF in atrial fibrillation group were also increased significantly than those of sinus rhythm group ( $P < 0.01$ ), whereas CVF-III remained compatible in the 2 groups. Aldosterone level, CVF-I, CVF-I/CVF-III ratio, and total CVF were similar between the left atria and right atria in both groups. It was found that CVF-I was positively correlated with the left atrial dimension ( $r=0.856, P < 0.001$ ), CVF was positively correlated with left atrial dimension ( $r=0.845, P < 0.001$ ), and CVF-I/CVF-III ratio was positively correlated with atrial fibrillation duration ( $r=0.766, P < 0.01$ ). Aldosterone level in local atria was also positively correlated with left atrial dimension ( $r=0.814, P < 0.001$ ) and CVF ( $r=0.885, P < 0.001$ ). **Conclusion:** Local atria aldosterone level may promote the process of atrial structural remodeling in patients with atrial fibrillation and may also participate in the development and persistence of atrial fibrillation.

**Keywords:** [atrial fibrillation](#) [aldosterone](#) [atrial remodeling](#) [collagen](#)

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