

论文

环维黄杨星D抗心房纤颤的作用及其电生理机制

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摘要:

环维黄杨星D(CVB-D)对CaCl<sub>2</sub>-Ach诱发小鼠在体心房纤颤和乌头碱、哇巴因或肾上腺素所致豚鼠离体心房纤颤,有明显的剂量依赖性抑制作用,且作用强度与胺碘酮(Ami)相似。CVB-D0.3~100μmol·L<sup>-1</sup>降低离体右心房自律性。对离体左心房,CVB-D0.3μmol·L<sup>-1</sup>抑制肾上腺素引起的异常自律性,延长有效不应期和动作电位时程,降低兴奋性;高浓度时,可降低V<sub>max</sub>,延长冲动传导时间。Ami0.3~30μmol·L<sup>-1</sup>有相似的电生理作用,但对V<sub>max</sub>无明显的影响。提示CVB-D可试用于心房纤颤的患者。

关键词: 环维黄杨星D 胺碘酮 心房纤颤 动作电位

ANTI ATRIAL FIBRILLATION EFFECTS OF CYCLOVIROBUXINE D AND ITS ELECTROPHYSIOLOGICAL MECHANISM STUDIED ON GUINEA PIG ATRIA

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Abstract:

Cyclovirobuxine-D (CVB-D) was shown to produce significant and dose dependent protective effects against atrial fibrillation induced by CaCl<sub>2</sub> Ach in mice. On atrial fibrillation induced by aconitine, ouabain or adrenaline in isolated guinea pig atria, the effects of CVB-D were similar to those of amiodarone. CVB-D 0.3~100 μmol·L<sup>-1</sup> was shown to depress the automaticity of the isolated guinea pig right atria. In isolated left atria, CVB-D 0.3 μmol·L<sup>-1</sup> was found to inhibit the abnormal automaticity elicited by adrenaline, to prolong the duration of action potential and effective refractory period and to reduce excitability. At high concentration (30 μmol·L<sup>-1</sup>), CVB-D was also found to decrease the maximal velocity of depolarization (V<sub>max</sub>) and to elongate the conduction time of initiation. Amiodarone 0.3~30 μmol·L<sup>-1</sup> was shown to closely resemble CVB-D in electrophysiology without effect on V<sub>max</sub>.

Keywords: Amiodarone Atrial fibrillation Action potential Cyclovirobuxine-D

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