

论文

川芎嗪对人类血小板的药理作用

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摘要:

川芎嗪对收缩状态的Salganicoff's人血小板条有松弛作用, ID₈₀约160μg/ml。明显抑制ADP、花生四烯酸和TXA₂同类物SQ26655所引起的收缩效应。能使血小板cAMP含量升高近1倍,随给药剂量增加,张力继续降低,但cAMP含量并不继续增加。用腺苷环化酶抑制剂SQ 22536后,川芎嗪对钙离子载体(calcium ionophore)A 23187所引起的血小板条收缩效应呈抑制作用,提示川芎嗪松弛血小板条的作用可能与抑制Ca²⁺作用有关。

关键词: 川芎嗪 血小板 环磷酸腺苷 Ca²⁺

THE PHARMACOLOGICAL EFFECT OF LIGUSTRAZINE ON HUMAN PLATELETS

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Abstract:

Ligustrazine is one of the active constituents extracted from *ligusticam wallichii* Franch, a traditional Chinese medicine used to invigorate blood circulation and to remove blood stasis. Its structure is tetramethyl pyrazine. This compound has been used in the treatment of acute cerebrovascular ischemia disease and angina pectoris with beneficial effects. We investigated the effect of ligustrazine on human platelet strips with Salganicoff's method and showed that ligustrazine relaxed the tension of contracting platelet strip, inhibited the contractile response to ADP, arachidonic acid and TXA₂ analogue SQ26655. The concentration of Ligustrazine required to relax 50% of the maximal effect was found to be 160 μg/ml in K-H solution with 1 mM Ca²⁺. The level of cAMP in ligustrazine treated platelet was nearly one-fold more as control. The effect of ligustrazine on relaxation of platelet strips was dose-dependent but not on the increase of cAMP. After using adenylate cyclase inhibitor SO 22536, ligustrazine inhibited the contractile response to calcium ionophore A23187. This result suggests that ligustrazine may inhibit the tension of platelet strip by inhibiting Ca²⁺ in cytoplasm.

Keywords: Platelet cAMP Calcium Ligustrazine

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