

论文

槲皮素在试管内对血小板功能和膜脂质流动性的影响

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摘要:

本文报道槲皮素对血小板聚集释放反应以及膜脂质流动性的影响。槲皮素浓度为300μmol时对PAF诱导和600μmol时对凝血酶诱导的大鼠血小板聚集几乎完全抑制;也明显地抑制ADP诱导的大鼠血小板聚集及凝血酶诱导的兔血小板³H-5 HT释放;在槲皮素浓度为30μmol时,即明显降低血小板膜脂质流动性。

关键词: 槲皮素 血小板聚集 释放反应 膜流动性

EFFECTS OF QUERCETIN ON FLUIDITY OF PLATELET MEMBRANE LIPIDS AND PLATELET FUNCTIONS

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Abstract:

Quercetin, a flavonoid widely distributed in plants, had been reported to inhibit platelet aggregation and secretion. The mechanisms of the quercetin effect on platelet function have not been completely understood. In the present paper, the effects of quercetin on platelet aggregation and ³H-5HT release induced by thrombin, ADP and PAF were studied; the effect of quercetin on the fluidity of platelet membrane lipids was also studied by means of technique of fluorescence polarization quercetin was found to inhibit platelet aggregation induced by ADP, thrombin (rat) and PAF (rabbit). Platelet aggregation was almost completely inhibited when drug concentration was increased to 150 μmol. for PAF and 600 μmol. for thrombin. However, when quercetin concentration was increased to 1200 μmol. platelet aggregation induced by ADP was inhibited uncompletely. The ³H-5HT content of platelet (rabbit) was decreased by quercetin to 28.3% to 53.1% in a range of concentration of 75 μmol. to 1200 μmol. The degree of fluorescence polarization was increased significantly by quercetin in a drug concentration as low as 30 μmol. (P<0.005) and increasing the drug concentrations was followed by increasing the degree of fluorescence polarization continuously. This indicates that the fluidity of platelet membrane lipids could be significantly decreased by quercetin. We Suggest that quercetin may be a valuable inhibitor of platelet functions. Decrease of the fluidity of platelet membrane lipids may be the mechanisms of quercetin action, but further study will be necessary to confirm it.

Keywords: Quercetin Platelet aggregation Platelet secretion Fluidity

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