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上海多器官保存液保存离体大鼠肝脏的实验研究 [点此下载全文](#)

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摘要:

目的: 观察上海多器官保存液(Shanghai-mutil-organ solution, SMO液)对离体大鼠肝脏的保存效果, 探讨应用SMO液保存离体供肝的可行性。方法: SD大鼠随机分为SMO液、UW液和HTK液保存组, 建立离体肝脏单纯低温保存模型, 保存液保存8、16、24、36h分析肝脏组织能量代谢情况, 观察肝组织形态学改变和肝脏细胞凋亡情况。结果: 保存16、24、36h, SMO液组肝组织三磷酸腺苷(ATP)、磷酸腺苷总量(TAN)及Atkinson能荷(AEC)均明显高于同时点HTK液组($P < 0.05$), 与同时点UW液组无显著差异; 形态学检查见SMO液组组织损伤较同时点HTK液组轻, 除细胞肿胀较同时点UW液组明显外, 其余表现基本一致。保存24、36h, SMO液组凋亡指数明显低于HTK液组($P < 0.05$), 而与UW液组无明显差异。结论: SMO液对大鼠离体肝脏的保存效果总体上与UW液相当, 优于HTK液, 仅在防止细胞水肿方面较UW液稍差。

关键词: [肝移植](#) [器官保存液](#) [肝](#)

Shanghai-mutil-organ solution in preservation of rat liver: an experimental study [Download Fulltext](#)

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Abstract:

Objective: To observe the preservative effect of Shanghai-mutil-organ (SMO) solution on rat liver and to assess the feasibility of SMO solution in preserving isolated human livers. Methods: SD rats were randomly divided into 3 groups according to the preservation solutions: SMO group, UW (University of Wisconsin Solution) group, and HTK (Histidinetryptophan-ketoglutarate solution) group. The simple cold storage liver model was established with isolated rat liver and the liver samples from each group were preserved with the 3 solutions for 8 h, 16 h, 24 h and 36 h. The energy metabolism was analyzed in all the samples and the morphological changes and hepatocytes apoptosis were observed after different preservation periods. Results: The liver tissue contents of ATP, TAN, and AEC in SMO group were significantly higher than those in HTK group at 16 h, 24 h, and 36 h ($P < 0.05$); the contents in SMO group were similar to those in UW group. Histological examination showed that the tissue damage in SMO group was milder than that in HTK group; the damages in SMO group and UW group were similar except that the swelling of cells in SMO group was severer than that in UW group. Apoptosis index in SMO group was lower than that in HTK group at 24 h and 36 h ($P < 0.05$); there was no significant difference in apoptosis index between SMO group and UW group. Conclusion: SMO solution has a similar preservative effect on rat liver to that of UW solution, only with more severe cell swelling than the latter. The effect of SMO solution is better than that of HTK solution.

Keywords: [liver transplantation](#) [organ preservation solutions](#) [liver](#)

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