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实验方法

次黄嘌呤与氧嗪酸钾不同剂量配伍制备高尿酸血症大鼠模型

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摘要 目的 确定次黄嘌呤与尿酸酶抑制剂氧嗪酸钾（OAPS）伍用制备高尿酸血症大鼠模型的合适剂量，为制备持续性高尿酸血症及痛风大鼠模型提供实验依据。方法 给大鼠不同配伍剂量的次黄嘌呤（ig）与OAPS（sc）制备代谢性高尿酸血症大鼠模型，于造模后不同时间观察模型大鼠血清尿酸、尿素氮和肌酐水平。结果 次黄嘌呤分别为125，250和500 mg·kg^{-1}，OAPS以25，50和100 mg·kg^{-1}与每个剂量的次黄嘌呤伍用造模。造模后3 h血清尿酸和肌酐浓度均有所升高，造模后9 h血清尿素氮浓度明显升高。在次黄嘌呤为500 mg·kg^{-1}，OAPS为100 mg·kg^{-1}时，造模后3，9和12 h模型大鼠血清尿酸浓度分别为（781±167），（627±291）和(366±196)μmol·L^{-1}，明显高于正常对照组（86±10），(75±16)和(80±15)μmol·L^{-1}；造模后24 h，血清尿素氮和肌酐水平〔(199±96)mg·L^{-1}和(55±16)μmol·L^{-1}〕均明显高于正常对照组〔（61±5）mg·L^{-1}和(21±2)μmol·L^{-1}〕。结论 次黄嘌呤500 mg·kg^{-1}和OAPS 100 mg·kg^{-1}伍用制备的代谢性高尿酸血症大鼠模型具有血清尿酸浓度高和维持时间长的特点。

关键词 高尿酸血症 次黄嘌呤 尿酸酶抑制剂 氧嗪酸钾 模型, 动物

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Establishment of hyperuricemia rat model with different doses of hypoxanthine and oxonic acid potassium salt

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Abstract

AIM To determine the optimal doses of hypoxanthine(HX) and uricase inhibitor oxonic acid potassium salt (OAPS) for establishment of hyperuricemia rat model, and provide experimental evidence to prepare continual hyperuricemia and gout animal model. **METHODS** Different doses of HX（125, 250 and 500 mg·kg^{-1}, ig）and OAPS（25, 50 and 100 mg·kg^{-1}, sc） were used to establish the hyperuricemia rat model. The serum levels of uric acid, urea nitrogen and creatinine were determined at different periods after preparing the model. **RESULTS** The serum levels of uric acid and creatinine increased at 3 h and urea nitrogen significantly elevated at 9 h after the model was prepared with different dose of HX（125, 250 and 500 mg·kg^{-1}） and OAPS（25, 50 and 100 mg·kg^{-1}）. When HX 500 mg·kg-1 combined with OAPS 100 mg·kg^{-1} were used to prepare the model for 3, 9 and 12 h，the serum levels of uric acid were（781±167）,（627±291）and (366±196) μmol·L^{-1}, respectively, all of which were higher than those in their corresponding control groups〔(86±10), (75±16) and (80±15)μmol·L^{-1}, respectively〕. Otherwise, the serum levels of both urea nitrogen〔(199±96)mg·L^{-1}〕 and creatinine〔(55±16)μmol·L^{-1}〕 were obviously higher than those of control group〔（61±5）mg·L^{-1} and (21±2)μmol·L^{-1}〕 at 24 h after this model preparation. **CONCLUSION** The serum level of uric acid in the hyperuricemia rat model prepared by HX 500 mg·kg^{-1} combined with OAPS 100 mg·kg^{-1} is higher and lasting for 24 h.

Key words hyperuricemia hypoxanthine uricase inhibitor oxonic acid potassium salt models animal

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