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pH对盐酸氯胺酮离体家兔鼻粘膜渗透性的影响

王惠姝¹, 张 锦², 徐 晖¹, 陈大为¹, 丁平田¹

(1. 沈阳药科大学药学院, 辽宁沈阳 110016; 2. 中国医科大学第二临床学院麻醉科, 辽宁沈阳110014)

摘要: 目的 研究pH值对盐酸氯胺酮经离体家兔鼻粘膜渗透性的影响, 为经鼻腔给药的处方设计和优化提供依据。方法 用体外扩散实验考察各种pH值条件下离体兔鼻粘膜对氯胺酮的透过性。结果 pH值小于7.40时, 氯胺酮的渗透系数无明显的变化, 而当pH值由7.40升高至8.23时, 渗透系数大幅度增加。结论 pH对氯胺酮经离体兔鼻粘膜的渗透性有较大的影响。对于弱酸弱碱性药物, pH值是一个必须考虑的处方因素。

关键词: 药剂学; 鼻腔给药; 鼻粘膜渗透性; 盐酸氯胺酮; pH

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Effects of pH on the permeability of ketamine hydrochloride through excised rabbit nasal mucosa

WANG Hui-shu¹, ZHANG Jin², XU Hui¹, CHEN Da-wei¹, DING Ping-tian¹

(1. School of Pharmacy, Shenyang Pharmaceutical University, Shenyang 110016, China; 2. Department of Anesthesiology, China Medical University Attached Second Hospital, Shenyang 110014, China)

Abstract: Objective To study the effects of pH on the nasal permeability of ketamine hydrochloride (KET·HCl). **Methods** The permeability of KET across excised rabbit nasal mucosa was measured using *in vitro* diffusion cell method at various pH. **Results** The partition coefficient does not vary obviously when the pH in donor is below 7.40, while it increases markedly when pH changed from 7.40 to 8.23. **Conclusion** The pH value is an important factor that affected the penetrability of ketamine hydrochloride through the excised rabbit nasal mucosa, which must be considered when designing a nasal used formulation, especially for a weak base or acid drug.

Key words: pharmaceuticals; nasal drug administration; nasal permeability; ketamine hydrochloride; pH value