

 中文标题 检索 跨刊检索

马钱子生物碱血浆蛋白结合率的测定与比较

投稿时间: 2010-06-18 责任编辑: 王亚君 [点击下载全文](#)

引用本文: 王绚,何超芹,陈亚,陈军,蔡宝昌,马钱子生物碱血浆蛋白结合率的测定与比较[J].中国中药杂志,2011,36(2):185.

DOI: 10.4268/cjcm20110221

摘要点击次数: 803

全文下载次数: 448

广告合作

作者中文名	作者英文名	单位中文名	单位英文名	E-Mail
王绚	WANG Xuan	南京中医药大学 药学院, 江苏 南京 210046 江苏省中药炮制重点实验室, 江苏 南京 210029	College of Pharmacy, Nanjing University of Chinese Medicine, Nanjing 210046, China Jiangsu Key Laboratory of Chinese Medicine Processing, Nanjing 210029, China	
何超芹	HE Chaohqin	南京中医药大学 药学院, 江苏 南京 210046	College of Pharmacy, Nanjing University of Chinese Medicine, Nanjing 210046, China	
陈亚	CHEN Ya	南京中医药大学 药学院, 江苏 南京 210046	College of Pharmacy, Nanjing University of Chinese Medicine, Nanjing 210046, China	
陈军	CHEN Jun	南京中医药大学 药学院, 江苏 南京 210046 江苏省中药炮制重点实验室, 江苏 南京 210029	College of Pharmacy, Nanjing University of Chinese Medicine, Nanjing 210046, China Jiangsu Key Laboratory of Chinese Medicine Processing, Nanjing 210029, China	chenjun75@163.com
蔡宝昌	CAI Baochang	江苏省中药炮制重点实验室, 江苏 南京 210029	Jiangsu Key Laboratory of Chinese Medicine Processing, Nanjing 210029, China	bccai@126.com

基金项目: 国家自然科学基金项目(30701111); 江苏省大学生创新训练计划项目(380)

中文摘要:目的: 测定马钱子总生物碱中主要有效成分马钱子碱和土的宁的血浆蛋白结合率, 并与同浓度单成分的血浆蛋白结合率进行比较。方法: 采用超滤法和高效液相色谱法对马钱子生物碱在大鼠血浆中的血浆蛋白结合率进行测定。结果: 单成分的马钱子碱在 $0.520, 1.300, 2.600 \text{ mg} \cdot \text{L}^{-1}$ 下的血浆蛋白结合率分别为 $(65.60 \pm 3.01)\%$, $(68.20 \pm 7.80)\%$, $(59.58 \pm 3.78)\%$ 。单成分土的宁在 $0.936, 2.340, 4.680 \text{ mg} \cdot \text{L}^{-1}$ 下的血浆蛋白结合率分别为 $(66.17 \pm 6.36)\%$, $(67.10 \pm 2.52)\%$, $(57.21 \pm 0.79)\%$ 。马钱子总生物碱中马钱子碱在 $0.519, 1.288, 2.607 \text{ mg} \cdot \text{L}^{-1}$ 下的血浆蛋白结合率分别为 $(62.19 \pm 2.45)\%$, $(69.55 \pm 5.84)\%$, $(61.76 \pm 3.68)\%$; 马钱子总生物碱中土的宁在 $0.940, 2.338, 4.674 \text{ mg} \cdot \text{L}^{-1}$ 下的血浆蛋白结合率分别为 $(54.79 \pm 3.55)\%$, $(57.13 \pm 4.49)\%$, $(59.31 \pm 3.65)\%$ 。结论: 马钱子碱和土的宁与血浆蛋白具有中等强度的结合, 马钱子总生物碱中马钱子碱与同浓度单体相比, 蛋白结合率差异不大; 总碱中土的宁与同浓度单体相比, 蛋白结合率有所降低。

中文关键词: 马钱子碱 土的宁 马钱子总生物碱 血浆蛋白结合率 超滤法 高效液相色谱法

Determination and comparison of plasma protein binding rate of alkaloids from seed of *Strychnou nux-vomica*

Abstract: Objective: To determine the plasma protein binding rates of brucine and strychnine in total alkaloids from the seed of *Strychnou nux-vomica*, and make comparison with the single components at the same concentration. Method: Ultrafiltration was employed to determine the rat plasma protein binding rate of the alkaloids from the seed of *S. nux-vomica*. The plasma concentrations were measured by RP-HPLC. Result: The protein binding rates of brucine were $(65.60 \pm 3.01)\%$, $(68.20 \pm 7.80)\%$, $(59.58 \pm 3.78)\%$ when the plasma concentrations were $0.520, 1.300, 2.600 \text{ mg} \cdot \text{L}^{-1}$, respectively. The protein binding rates of strychnine was $(66.17 \pm 6.36)\%$, $(67.10 \pm 2.52)\%$, $(57.21 \pm 0.79)\%$ when the plasma concentrations were $0.936, 2.340, 4.680 \text{ mg} \cdot \text{L}^{-1}$ respectively. As to the total alkaloids from the seed of *S. nux-vomica*, The protein binding rate of brucine was $(62.19 \pm 2.45)\%$, $(69.55 \pm 5.84)\%$, $(61.76 \pm 3.68)\%$ when the plasma concentrations were $0.519, 1.288, 2.607 \text{ mg} \cdot \text{L}^{-1}$, respectively. And the protein binding rates of strychnine were $(54.79 \pm 3.55)\%$, $(57.13 \pm 4.49)\%$, $(59.31 \pm 3.65)\%$ when the plasma concentrations were $0.940, 2.338, 4.674 \text{ mg} \cdot \text{L}^{-1}$, respectively. Conclusion: Brucine and strychnine have medium capacity in binding to plasma protein. In comparison with the single component of the same concentration, the protein binding rate of brucine in total alkaloids shows little difference, while there seems to be an obvious decrease for strychnine.

keywords: brucine strychnine total alkaloids plasma protein binding rate ultrafiltration HPLC

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)