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论著

尼美舒利对吲哚美辛诱导的大鼠胃黏膜损伤的保护作用

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摘要 目的 探讨尼美舒利对胃黏膜的保护作用及其可能的作用机制。方法 大鼠禁食12 h后，ig给予吲哚美辛30 mg·kg^{-1}制备急性胃黏膜损伤模型，5 min后分为模型对照、尼美舒利100 mg·kg^{-1}、塞来昔布100 mg·kg^{-1}、美洛昔康4 mg·kg^{-1}、双氯芬酸钠50 mg·kg^{-1}和布洛芬600 mg·kg^{-1}组，分别ig给予相应药物；另设正常对照组。6 h后处死所有大鼠，测定胃溃疡面积。生化比色法检测大鼠胃组织和血清中谷胱甘肽（GSH）和丙二醛（MDA）含量及超氧化物歧化酶（SOD）活性。结果 正常对照组大鼠胃黏膜表面光滑，黏膜皱襞纹理清晰；模型组大鼠均见急性胃溃疡，溃疡面积为（10.6±7.4）mm^2；与模型组比较，尼美舒利和塞来昔布组胃溃疡面积显著减小，分别为4.1±1.7和（4.9±3.2）mm^2（P<0.01）；美洛昔康组未见明显变化，为(8.1±3.5)mm^2；双氯芬酸钠和布洛芬组胃溃疡面积明显增加，分别为15.4±4.8和（16.0±7.3）mm^2（P<0.01）。与正常对照组比较，模型组大鼠胃组织中GSH含量和SOD活性明显降低（P<0.05），MDA含量显著升高（P<0.01）；血清中MDA含量显著升高（P<0.01），而GSH含量和SOD活性变化不明显。与模型组相比，尼美舒利组胃组织中GSH含量和SOD活性明显升高（P<0.05, P<0.01），MDA含量明显降低（P<0.01）；血清中GSH含量明显增加（P<0.01），MDA含量明显降低（P<0.01）；塞来昔布组大鼠胃组织中SOD活性明显升高（P<0.01），血清中MDA含量明显降低（P<0.01），其他指标无明显变化；美洛昔康、双氯芬酸钠和布洛芬对模型大鼠胃组织和血清中GSH, MDA含量及SOD活性均无明显影响。结论 尼美舒利对吲哚美辛诱导的大鼠急性胃黏膜损伤具有明显的保护作用，作用机制可能与其抗氧化活性有关。

关键词 尼美舒利 胃溃疡 谷胱甘肽 丙二醛 超氧化物歧化酶

分类号 R963, R975.6

Protective effect and antioxidation of nimesulide on gastric mucosa injury induced by indometacin in rats

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Abstract

OBJECTIVE To investigate the protective effect and mechanisms of nimesulide against gastric mucosa injury. **METHODS** Rats were fasted for 12 h, and the acute gastric ulcer rat model was prepared by ig indometacin 30 mg·kg^{-1}. Five mininutes later, the rats were divided into 6 groups: model, nimesulide 100 mg·kg^{-1}, celecoxib 100 mg·kg^{-1}, meloxicam 4 mg·kg^{-1}, diclofenac sodium 50 mg·kg^{-1} and ibuprofen 600 mg·kg^{-1} groups and ig given the corresponding drug, respectively. The normal control and model group were given normal saline of the same volume. After 6 h, the rats were sacrificed and gastric ulcer areas were measured. Gastric tissue and serum glutathione (GSH) and malonaldehyde (MDA) content and superoxide dismutase (SOD) activity were detected by biochemical assay. **RESULTS** Gastric mucosa in normal control rats was smooth and with clear folds. The acute gastric ulcer was seen in model control group and the ulcer area was (10.6±7.4) mm^2. Compared with model group, the ulcer area significantly decreased in nimesulide and celecoxib groups, and the ulcer area was 4.1±1.7 (P<0.01) and (4.9±3.2)mm^2 (P<0.05), respectively. No significant change was found in meloxicam group. The gastric ulcer area was increased in diclofenac sodium and ibuprofen groups, and the ulcer area was 15.4±4.8 (P<0.05) and (16.0±7.3)mm^2 (P<0.05), respectively. Compared with normal control group, the gastric tissue GSH content and SOD activity were decreased (P<0.05) and MDA content significantly increased(P<0.01) in model group. The serum GSH content and SOD activity did not change significantly, but MDA content increased significantly (P<0.01). Compared with model control group, the gastric tissue GSH content and SOD activity increased (P<0.05, P<0.01), MDA content decreased(P<0.01), serum GSH content elevated(P<0.01) and MDA content declined (P<0.01) in nimesulide group. In celecoxib group, the gastric tissue SOD activity increased(P<0.01) and serum MDA decreased(P<0.01), without significant changes in other indicators. Meloxicam, diclofenac sodium and ibuprofen had no

effect on gastric tissue and serum GSH, MDA content or SOD activity of the acute gastric ulcer rat model.
CONCLUSION Nimesulide has significant protective effect against indometacin induced gastric mucosal injury, which maybe associated with its antioxidation.

Key words nimesulide gastric ulcer glutathione malonaldehyde superoxide dismutase

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