

实验研究

骨炎灵的抗炎作用

洛阳高等医学专科学校 (471003) 袁青祿 岳苏华 韩晓燕 张美琴 王建刚
袁轩* 袁洪涛*

摘要 骨炎灵是由黄连等中草药组成的复方制剂。实验结果表明：骨炎灵对小鼠琼脂性足跖肿胀、大鼠甲醛性踝关节肿胀和棉球肉芽组织增生，以及组织胺引起的大鼠皮肤血管通透性增加均有明显的抑制作用。

关键词 骨炎灵 抗炎作用 病理学

骨炎灵为中药复方制剂，由黄连、白芷、地锦草、元胡和薄荷等药物组成。具有清热解毒、活血止痛、渗湿消肿等功能，在临床上治疗慢性骨髓炎等疾病取得显著疗效。本文旨在从鼠实验性炎症模型探讨骨炎灵的抗炎作用。

材 料

药物：骨炎灵水提取液，由洛阳白马寺骨科医院、洛阳市骨髓炎研究中心供应；氢化考的松系武汉第二制药厂产品；二盐酸组织胺为中国科学院上海生化研究所生产；依文思兰系上海化学试剂采购供应站经销。

动物：昆明种小白鼠 (18~25g) 和 Wistar 种大鼠 (120~187g)，雌雄各半，由150医院动物实验中心提供。

仪器：721分光光度计，上海第三分析仪器厂制造。

方法与结果

1. 对小鼠琼脂性足肿胀的作用⁽¹⁾

小鼠腹腔内注射骨炎灵水提取液 (相当于生药2g/kg, 以下均同) 和生理盐水(对照组)一小时后, 于右后足跖皮下注射1%琼脂0.05ml, 致炎后一小时、二小时、三小时、四小时测足跖厚度, 以左右足厚度差为肿胀程度, 结果见表1。四小时后于后肢长毛和绒毛交界处, 剪下左右足爪分别称重, 左右足重量差为肿胀程度, 生理盐水组平均重量为81.85±5.3mg, 骨炎灵组为29.7±2.2mg, 二者比较有明显差异 (p<0.01)。

表 1 小鼠致炎后足跖肿胀程度

($\bar{x} \pm SDmm$)

组 别	鼠数 (只)	1小时	2小时	3小时	4小时
生理盐水组	10	0.735±0.297	1.174±0.514	1.08±0.473	1.01±0.56
骨炎灵组	10	0.555±0.306	0.551±0.299**	0.447±0.337**	0.408±0.439*

* P<0.05 **P<0.01

2. 对大鼠甲醛性关节肿的作用⁽²⁾

给大鼠右踝关节皮下注射2.5%甲醛溶液0.1ml, 第2天起腹腔内注射骨炎灵水提取液(3g/kg)、氢化考的松10mg/kg和生理盐水, 每日一次, 连续5日, 并逐日测踝关节纵横直径和踝关节上缘后肢周长, 以左右后肢差为肿胀程度, 结果见图1。

3. 对大鼠棉球肉芽组织增生的影响^(3,4)

大鼠随机分3组, 每组8只, 于乙醚浅麻醉下在大鼠背部两侧皮下各埋入20mg (直径6.0±0.5mm) 的无菌脱脂棉球一只, 术后二小时开始腹腔内注射等容量的骨炎灵提取液 (3g/kg)、氢化考的松 (10mg/kg) 和生理盐水, 每日一次, 连续7日, 7天后处死动物, 剥出周围已包裹肉芽组织的棉球, 在90℃烘箱内放置一

*洛阳白马寺骨科医院

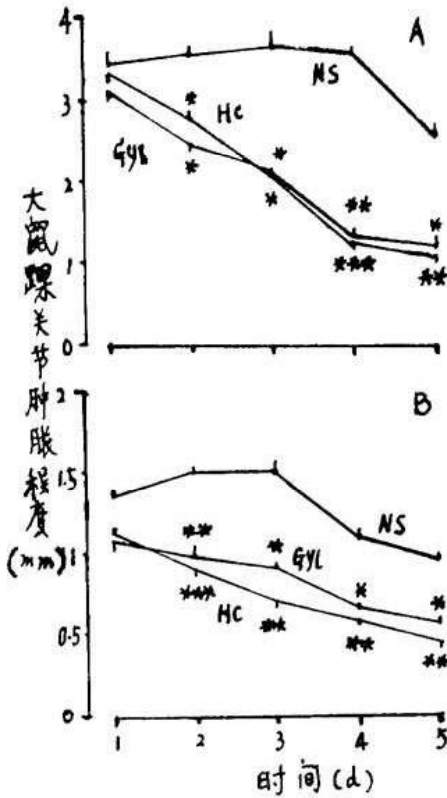


图1 骨炎灵对甲醛引起的大鼠踝关节肿胀的作用

A)左右踝关节上缘周长差 B)左右踝关节纵横直径平均差

NS: 生理盐水组(n=8), GYL: 骨炎灵组(n=8)

HC: 氢化考的松组(n=8)

*p<0.05, **p<0.01, ***p<0.001

小时后称重, 减去原棉球重量即为肉芽肿净重。结果生理盐水组平均为 146.57±36.28mg, 骨炎灵组为85.04±15.05mg, 氢化考的松组为80.04±4.80mg, 后二者与生理盐水组比较均有非常显著性差异 (p<0.001), 对肉芽组织增生的抑制率分别为41.77%和45.39%。

4. 对大鼠皮肤血管通透性的影响^[1,5]

大鼠腹腔内注射骨炎灵 (3g/kg)、氢化考的松(10mg/kg)和生理盐水后2小时, 于腹部正中中线两侧对称两点 (间隔4cm) 分别皮内注射二盐酸组织胺溶液0.05ml (内含组织胺50μg), 立即舌下静脉注射 0.5% Evans蓝0.1ml/100g, 20分钟后处死动物, 剥皮测着色皮肤纵横 2个直径, 取平均半径r, 按πr²计算面积, 并将着色皮肤剪碎, 放入丙酮生理盐水 (7:3) 溶液中浸泡24小时, 取滤液用721分光光度计比色, 结果见表2。

讨 论

慢性骨髓炎的治疗比较困难, 常需采取中西医结合治疗。骨炎灵治疗慢性骨髓炎已近千例, 它能明显改善症状, 减少炎性分泌物和促进骨骼生长等 (资料待发表)。为了发掘和整理祖国医学遗产, 我们对骨炎灵进行了研究。上述实验表明, 骨炎灵水提取液对动物急性、亚

表2 骨炎灵对组织胺引起的毛细血管通透性增加的影响

组 别	鼠数 (只)	蓝染面积 (x̄±SD mm ²)	抑制率	P 值	Evans 蓝浓度 (x̄±SD μg/ml)	抑制率	P 值
生理盐水组	7	287.35±94.66			1.25±0.24		
骨炎灵组	8	91.32±48.52	68.23%	<0.001	0.54±0.37	56.8%	<0.001
氢化考的松组	7	87.24±35.22	69.64%	<0.001	0.51±0.25	59.2%	<0.001

急性和慢性炎症模型, 以及对组织胺引起的毛细血管通透性增加, 均有显著抑制作用。对实验性炎症骨炎灵 (相当于生物3g/kg) 的疗效与氢化考的松 (10mg/kg) 接近。此种非特异性抗炎作用, 可能是骨炎灵治疗慢性骨髓炎发挥疗效的原因之一。骨炎灵的抗炎作用机理以及骨炎灵的其他作用, 均有待进一步研究。

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Abstracts of Original Articles

Anti-inflammatory action of Gu Yan Ling

Yuan Qing-lu (袁青禄) et al

Luoyang Senior Medical School, Henan Province (471003)

Gu Yan Ling is a compound preparation composed of *Rhizoma Coptidis* et al Chinese herbs. Experiments indicated that Gu Yan Ling had evident inhibiting actions on mice agar-induced swelling of the tarso-metatarsal region, rat formalin-induced ankle joint swelon and proliferation of cotton granulosis as well as increasing of vascular permeability of the rat skin induced by histamine.

Key Words Gu Yan Ling, inflammation, pathology

(Original article on page 5)

Pathological changes of rat tendon and muscle in experimental Bi-syndrome

Lu Ai-ping (吕爱平) et al

Institute of Basic Medical Science, China Academy of Traditional Chinese Medicine (100700)

The pathological changes of rat tendon and muscle in experimental Bi-syndrome indicated that there were invading of fat tissue and micro-vessels at the junction of the tendon and muscle, complete rupture of tendon and muscle fibres, derangement of the tendon fibres at the juncture of tendon and bone.

Key Words Musculo-skeletal system, Bi-syndrome, animal experimental pathology

(Original article on page 7)

Clinical study on lumbar intervertebral disc protrusion complicated with lumbar nerve passage stenosis

Cai Yong-nian (蔡永年) et al

Zhejiang Traditional Chinese Medicinal College (310000)

Clinical analysis on 78 cases of lumbar intervertebral disc protrusion complicated with lumbar nerve passage stenosis was made and it was found that lumbar nerve passage stenosis mostly appeared at the lateral recess region and less on the space between disc and ligamentum and least in the intervertebral foramina. clinically apart from typical sciatica, there were symptoms and signs of nerve root damage. The therapeutic measure was mainly based on operation.

Key Words Lumbar intervertebral disc protrusion, stenosis of the nerve root canal, case report

(Original article on page 15)

Preparation, management and follow-up observation on chemonucleolysis

Zhang Xiao-yang (张晓阳) et al

Shanghai Xu Hui Distract Central Hospital (200032)

More than one thousand and three hundred cases of lumbar intervertebral disc protrusion were treated with chemonucleolysis and a rate of excellency and fairness of 81.9% was obtained. The indications of chemonucleolysis, the point of injection by help of imaging examination, application of adjuvant drug pre-treatment and follow-up observations and management after chemonucleolysis etc. were introduced.

Key Words Chemonucleolysis, radiodiagnosis, preoperative medication

(Original article on page 13)

Assessment of patellar fracture treated with the patellar holder

Jin Hong-bin (金鸿宾) et al

Tianjin Hospital (300211)

Five hundred and twenty-eight cases of various types of patellar fracture were treated with patellar holder and with a rate of excellency and fairness being 97%. The apparatus bears the advantages of no incision on the skin and joint capsule, without any more damage on the soft tissues, facility for fracture-healing, reduction and fixation. Biomechanical measurement proved that it could maintain an enhanced fixation.

Key Words Patellar holder, external fixation, integration of traditional Chinese and western therapeutic methods

(Original article on page 22)

启 事

1. 本部现存少量 89、90、91、92年的《中国骨伤》。单行本每年7.20元,精装合订本 90、91、92年每本16.80元;(以上含邮资)。

2. 我部现有少量针灸刀器具。售价为70元/套,另加邮资、包装7元。

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