

养阴生肌膜的研究

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摘要 以羧甲基纤维素钠作膜材料,研制了中药养阴生肌散的改造剂型——养阴生肌膜,能用于皮肤磨削手术创面和外伤性创面。动物模型研究表明,该膜防止创面感染,与纱布敷料无明显差异;控制创面组织液渗出及创面快速愈合。此膜明显优于纱布敷料($P<0.01$),并有减轻术后水肿和创面刺激作用。该膜原料易得,使用方便,制剂稳定。

关键词 养阴生肌膜 养阴生肌散 羧甲基纤维素钠 磨削术

传统纱布包扎有很多缺点,如:创面不便观查,组织渗出物污染,换药不慎易引起新创伤。而我院常用促进创面愈合中药养阴生肌散,易脱落,随组织液渗出而流失,对创面无隔离保护作用。本实验根据创面的特性,利用胶膜的良好保护性和载药性,研制了一种涂膜剂——养阴生肌膜,用以代替临床纱布敷料,获得了满意的疗效。

1 方法与结果

1.1 膜剂制备:处方:青黛2g,甘草2g,冰片2g,黄柏1g,龙胆草1g,人工牛黄2g,鞣酸10g,羧甲基纤维素钠(CMC-Na)8g,甘油20ml,20%甘露醇30ml,蒸馏水加至200ml。

制备:取甘油,加入人工牛黄、鞣酸、冰片研细,加适量蒸馏水。另取CMC-Na溶于蒸馏水中,加入上研细液及青黛、甘草、黄柏、龙胆草细粉和甘露醇,加蒸馏水至200ml,充分搅匀,分装,经低温间歇灭菌,得深灰褐色粘稠液。

1.2 质量控制:粘度测定:上海天平仪器厂NDJ-1型粘度计,25℃粘度应在45800~46900mPa·s之间。

pH测定:25℃,1%的养阴生肌膜水旋浮液pH应在 6.5 ± 0.1 。

可溶性试验:取本品适量,涂于玻璃板上自然干燥成膜后取下,分别置于37℃水浴中中和70%酒精中,在水中的溶化时间应不少于15min,在酒精中应不少于60min。

含量测定:另文报道。

1.3 稳定性观察:将本品装入塑料药瓶,密封,置冰箱4℃贮存2年,其外观不变,经测定,粘度、pH、含量均无明显变化。血清培养基做细菌检测为阴性。

1.4 动物实验:白化豚鼠20只,雌雄各半,体重262~315g。

磨削创面模型:剃净豚鼠背部的毛,碘酒消毒,酒精脱碘。按住豚鼠的后腿和头部,使背部皮肤绷紧无皱。在脊椎两侧相对应的部位,用台式牙钻车的砂轮分别贴背部皮肤轻轻地磨削,用棉球擦去残皮、溢血,磨削深度至皮肤网状层,创面直径保持在 2.5 ± 0.2 mm。

创面处置:每只豚鼠手术后,随机一侧先用呋喃西林油纱布覆盖创面,再用消毒纱布包扎固定,另一侧涂用养阴生肌膜于创面,略超出创面。分笼单只饲养,观察记录。

1.5 结果:见表1、2。表明养阴生肌膜的控制渗出、创面快速愈合明显优于纱布($P<0.001$)。

2 讨论

2.1 养阴生肌膜中青黛、黄柏、龙胆草均有杀菌、消毒作用,冰片有消肿、痛作用,甘草

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表1 养阴生肌膜应用于豚鼠背部创面观察结果

观察项目	纱布敷料	养阴生肌膜
创面渗出量	浸透纱布	少量渗出
渗出天数	平均4d	10(min)
换药次数	5次	0次
燥动时间	5d	0.5d
平均愈合时间	10d	3d
消肿除时间	4d	2d

表2 养阴生肌膜的表皮适应性能

观察项目	成膜时间	粘附性	透气性	柔韧性	顺应性
结 果	平均10 (min)	平整	表皮 润泽	指 压 有弹性	略 皱

及人工牛黄具促进肉芽生长作用，鞣酸可使局部组织蛋白凝固，配合以成膜材料可收到良好的控制渗出效果。

- 2.2 该膜的研制使用可减少换药次数，防止因活动造成的创缘相对移位，使愈合创面平整。
- 2.3 本实验基于养阴生肌散的良好促生作用及《皮肤创面胶的研究》一文的经验，合理的设计、研制得到纱布的良好代替品。

参 考 文 献

1 申国庆. 中国药学杂志, 1993, 12: 730

2 汤 光. 药物制剂化学. 北京: 人民版社, 1981. 136

3 陈新谦, 等主编: 新编药理学. 第12版. 北京: 人民卫生出版社, 1986. 686

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罂粟属植物中的又一种新生物碱5'-O-脱甲基那可丁

Repasi J, et al. planta Med , 1993, 59 (5) : 477

到目前为止,从罂粟属植物中已分离、鉴定出30多种生物碱。最近,匈牙利一家生物碱化学有限公司的研究人员在纯化罂粟属植物中的生物碱一那可丁时,又发现了一种新生物碱。用硫酸氢钠溶液提取罂粟草,提取液加乙醇处理,回收乙醇后用硫酸铵调溶液pH 8 ~ 9 , 加入甲苯后吗啡沉淀析出。从甲苯层中分离出硫酸可待因后,用醋酸萃取甲苯层得到蒂巴因与那可丁的混合物,混合生物碱继续用醋酸处理分离出蒂巴因。粗品那可丁用乙醇重结晶,母液经PTLC或氯仿-己烷重结晶处理得5'-O-脱甲基那可丁 (mp161~163℃)。薄层层析证明: 该生物碱的极性大于吗啡或那可托林,对

FeCl₃呈阳性反应,以那可林、那可托林为参照物经高压液相、光谱分析(红外、质谱、核磁)确定该生物碱的结构如图。

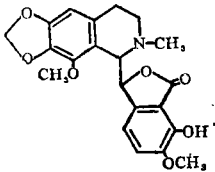


图 5'-O-脱甲基那可丁
(孙士青 摘译)

欢迎订购《中药研究与文献检索》

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ABSTRACTS OF ORIGINAL ARTICLES

Studies on the Chemical Constituents of Yunnan Pholidota (*Pholidota yunnanensis*)

Ma Xuemei, Li Manfei and Zhang Qingrong

Triterpenoids and a sterol were isolated from *Pholidota yunnanensis* Rolfe for the first time. They were identified as cyclopholidone (I), cyclopholidonol (II), hexacosyl alcohol (III), 25-methylene cycloartanyl p-hydroxy-trans-cinnamate (V) and β -sitosterol on the basis of physical and spectral data. Among them, V is a new compound, and named as pholidotanin.

(Original article on page 59)

Studies on the Chemical Constituents of Common Macrocarpium (*Cornus officinalis*)

Xu Lizhen, Li Huiying, Tian Lei, et al

Ten compounds isolated from *Cornus officinalis* Sieb. et Zucc. were identified as ursolic acid (I), 5, 5'-di- α -furaldehydic dimethyl ether (II), 5-hydroxymethylfurfural (III), gallic acid (IV), 3, 5-dihydroxybenzoic acid (V), loganin (VI), 7-O-methylmorroniside (VII), 7-dehydrologanin (VIII), β -sitosterol (IX), and dehydromorroniaglycone (X) on the basis of physicochemical constants and spectral analysis. X was found from nature for the first time and named as dehydromorroniaglycone. II, III and VII were also isolated for the first time from *cnrnuceac*.

(Original article on page 62)

Determination of Bis-(5-formyl-furfuryl)-ether and 2,4-Dihydroxy-6-methoxy-3-methyl-acetophenone in the Root of Yuexiandaji (*Euphorbia ebracteolata*) by HPLC

Zhao Kuijun, Xu Guojun, Jin Rongluan, et al

An HPLC method for the quantitative analysis of bis-(5-formyl-furfuryl)-ether and 2, 4-dihydroxy-6-methoxy-3-methyl-acetophenone in Chinese drug, Langduc (*Euphorbia ebracteolata*) was developed. The solvent system used was methanol-water-10% acid (45:55:2) (adjusted to pH 5.4 by 10% ammonia) on ODS column at 280nm. Tetrahydropalmatine was used as an internal standard. The operation can be completed in 30min. This method is sensitive, simple and accurate with good reproducibility. It can be applied to the quality control of the crude drug of *E. ebracteolata*.

(Original article on page 66)

Studies on the Use of "Yangyinshengji" Film as Wound Dressing

Guo Zhi, Meng Gen, Zheng Yongyi

"Yangyinshengji" Film is a modernized wound dressing prepared by incorporating carboxymethyl cellulose into the traditional Chinese powdery prescription for nourishing the "Yin" and promoting tissue regeneration. When used as dressing in dermabrasive wound of

short-haired albino guinea pigs, in comparison with conventional gauze dressing, it showed no significant differences in preventing wound infection, but is more effective in reducing wound exudation or enhancing wound healing ($P < 0.001$). It has the extra advantage of reducing edema and relieving skin irritation. It is convenient to apply and quality control analysis showed that the film is stable.

(Original article on page 68)

Procedure for the Industrial Production of Sodium Alginate from Lieyemaweizao (*Sargassum siliquastrum*)

Gong Yuchuan, Zhang Mingzhu, Zou Hengqin

Process for the industrial production of sodium alginate from *Sargassum siliquastrum* was reported. The main influential factors in the extraction process were discussed in detail. As a result, the product conformed to British Pharmacopoeia (1968) in colour, lustre, purity and heavy metals. The yield was 20%.

(Original article on page 70)

Primary Study on the Effect of Xanthotoxin, and Umbelliferone in Photochemotherapy

Li Jiarong, Cheng Nanqiu, Luo Chaodong, et al

External use of either xanthotoxin or umbelliferone alone in normal rats showed that the chromosomes of the myelocyte were mutated at an aberrant rate of 2.0% and 0.2%, respectively ($P < 0.01$). When used in combination with UV-N irradiation for one week, the aberrant rate was 6.0%, and 1.0% respectively ($P < 0.001$). At two week's treatment they were 4.0%, and 2.0%, respectively ($P < 0.05$). It is thus suggested that in photochemotherapy xanthotoxin for external use have obvious mutational effect and umbelliferone have a protective action against irradiation.

(Original article on page 77)

Studies on the Effects of White Dendrobium (*Dendrobium candidum*) and American Ginseng (*Panax quinquefolius*) on Nourishing the Yin and Promoting Glandular Secretion in Mice and Rabbits

Xu Jianhua, Chen Lizuan, et al

Results of the study showed that *Dendrobium candidum* and domestically cultivated *Panax quinquefolius* can alleviate asthenic symptoms in mice with thyroidism-type "Yin" deficiency. Combined use of these two drugs protected these mice from death. Both drug antagonized the inhibitory effect of atropine on salivary secretion in rabbits, and when used in combination even increased salivary secretion in normal rabbits. These results proved that *D. candidum* and domestically cultivated *P. quinquefolius* possessed the effects of nourishing "Yin" and promoting glandular secretion with a synergistic effect when used in combination.

(Original article on page 79)