

## 经验交流

## 腰椎间盘突出症外科治疗远期疗效分析

上海铁路局中心医院(200072) 冉永欣 戴志和\*

**摘要** 1975~1994 年采用椎板黄韧带开窗和全椎板切除两种不同术式治疗腰椎间盘突出症 500 例。结果表明就解除坐骨神经痛而论两种术式无差异。而椎板黄韧带开窗却具有损伤小,既能摘除髓核去除间盘后方复合性病变恢复神经功能又维持了脊柱稳定性的优点,优良率占 98%。

**关键词** 腰椎间盘突出症 髓核摘除

椎间盘突出常合并黄韧带肥厚,神经根粘连,突出物骨化和骨性根管狭窄。全椎板切除固然能彻底去除病变但损伤大后遗症多不可滥用,本组经 3~19 年平均 9.5 年随访,结果证实椎板黄韧带开窗术是比较理想的术式。

## 临床资料

1. 发病情况:本组 500 例男 355 例,女 145 例;年龄 15~69 岁;单侧坐骨神经痛 465 例,腓神经运动麻痹 5 例,腰骶平面下截瘫 3 例;术后复发 10 例。

2. 手术病理所见:侧突型 454 例,中央突 46 例,多发性突出 67 例,髓核脱入椎管 88 例。合并骨性椎管狭窄 50 例,突出物骨化 38 例,黄韧带肥厚 192 例,神经根粘连 126 例。

## 手术方法

1. 麻醉与体位:硬膜外麻醉,侧卧位屈髋屈膝,患侧在上,胸下垫枕。

2. 切口与术中定位:从患侧髂嵴最高点做脊柱垂线相交腰<sub>1</sub>棘突,此点为标志按突出部位高低做相应 4~5cm 皮肤切口,沿骨膜下剥离骶棘肌以 Taylor 氏拉钩牵开暴露相应椎板及椎板间隙。

3. 椎板黄韧带开窗与髓核摘除:根据 L<sub>5</sub>-S<sub>1</sub> 椎板间距宽黄韧带短的解剖特点,切除 L<sub>5</sub> 椎板下缘和 S<sub>1</sub> 上缘,用脑膜起子从游离的黄韧带边缘分离,确认与硬脊膜无粘连后切除,显露硬脊膜沿此界面向侧方扩大术野可清楚暴露 S<sub>1</sub> 神经根和突出的椎间盘。

4. 髓核摘除与根管探查:分离受压神经根牵向中线在突出顶点十字切开尽量将髓核摘除,然后探查根管如有狭窄以 120°斜口枪式咬骨钳扩大根管内径直至神经根横向移动 1cm 无张力,一般不需切除关节突。

## 随访结果

疗效评定:优,腰腿痛症状完全消失恢复原工作;

良,腰腿痛症状基本消失劳累后轻度腰酸或下肢不适,恢复原工作或轻工作;可,下肢症状大部消失遗留慢性腰痛无力,劳动能力低下或神经损害部分恢复可做轻工作,劳累后需短期休息;差,症状无好转神经未恢复括约肌功能障碍,不能工作。两种术式疗效对比见下表附表。

疗效	椎板黄韧带开窗例数	%	全椎板切除例数	%
优	198	80.5%	118	46.5%
良	43	17.5%	93	36.6%
可	4	1.6%	37	14.6%
差	1	0.4%	6	2.4%
总计	246	100	254	100

## 讨论

1. 手术适应证与时机选择:初发病例经系统保守治疗多数可治愈,有下列情况之一者应手术治疗。(1)确诊后经 6 个月系统保守治疗无效。(2)病程虽短根性症状明显对症治疗无效影响工作和生活。(3)中青年患者症状虽不严重因反复发作影响工作和学习。(4)临床表现不典型脊髓造影或 CT 检查有椎间盘突出征象保守治疗无效。(5)发病过程中突然剧痛继而出现运动、反射或括约肌功能障碍时,如无禁忌症应尽早手术以防引起神经不可逆损害。

2. 椎板切除范围与疗效问题:从手术病理和随访结果都表明椎板黄韧带开窗是比较理想的术式。(1)93%的病例临床表现为单侧坐骨神经痛。(2)手术证实 90.8%病例是侧方型突出。(3)91.8%病例发生在 21~60 岁之间,这是工作和学习最繁重的年龄,更需要稳定的脊柱以保证正常负荷。(4)间盘突出所合并的根管狭

窄、神经根粘连、黄韧带肥厚等复合性病变都局限在突出间盘周围,本术式既能摘除髓核又能根管减压和神经根粘连松解。由于保留了椎板与椎弓根连续性,脊柱稳定性几乎不受影响。因暴露面小对马尾神经血供损伤甚少。根据长期随访的结果就解除坐骨神经痛而论两种术式无差异。但全椎板切除后由于脊椎后柱严重破坏,脊柱稳定性受到影响,加之广泛疤痕粘连压迫引起慢性腰痛劳动能力低下,由于健侧不必要的暴露和术后积血机化粘连引起健肢麻木不适者占 9.4%。X 线复查部分病例呈现腰前凸增大,椎体排列不整,个别病例发生滑脱,这种不稳定征象随着时间推移而加重。Newman 认为腰部无力或发生症状与全椎板切除有关<sup>[1]</sup>。我们认为只有在巨大中央型突出或合并中央管狭窄时方行全椎板切除。在同侧双突出或髓核脱出累及二个神经根时可开二个窗或半椎板切除。

3. 术后复发问题:手术治愈若干年后部分病例因残留髓核脱出引起复发已成为椎间盘突出症再手术主要原因<sup>[2~5]</sup>。本组有 10 例发生在术后 1~17 年,占同期再手术病例的 45.5%,其中开窗术式 5 例在同侧,全椎

板切除 5 例中 4 例在对侧 1 例在同侧。根据再手术摘除髓核量和同侧脱出处看不到愈合的纤维环说明髓核遗留过多是复发的主要因素。随着术后椎间活动增加和椎间压力不平衡,促使遗留在椎间内的髓核加快退变进程,当椎间压力超出未能完全愈合的纤维环强度时残留髓核就会从原位再脱出。全椎板切除病例又因椎间明显失稳促使对侧已变弱的纤维环发生破裂<sup>[5]</sup>。所以应尽量将髓核摘除防止复发。

**参考文献**

1. Newman, P. H. Sprung Back, J. Bone & joint Surg 34-B:30. 1952.
2. 陆裕朴,等. 腰椎间盘突出症再手术治疗 56 例临床研究. 中华骨科杂志. 1991;2:81.
3. Tregonning GD, Recurrent Lumbar disc prolapse after discectomy. Bone joint Surg (Br). 1983;65:520.
4. 陈长玉. 腰椎间盘突出症再手术 30 例报告. 中华外科杂志. 1989;10:585.
5. 董天华,等. 腰椎间盘突出症再手术病例分析. 中华骨科杂志. 1986;6:441.

(收稿:1994-02-14)

## 起重机外固定架治疗股骨颈骨折的护理

河北省廊坊市人民医院(102800) 王宝萍

我科用起重机外固定架治疗股骨颈骨折,通过对 186 例股骨颈骨折患者的临床护理,摸索出初步的护理方法,介绍如下。

**术前护理**

1. 此病多见于老年人,大多数患者表现为恐惧,忧虑,固执的心理。极需进行技巧的语言安慰,熟练的操作技术,细心的生活护理。使患者对护士产生信赖感,尽快的建立适应心理,配合治疗。

2. 按照骨科的护理常规进行护理。

**术后护理**

1. 术后 2 小时患者可自行坐起,睡眠以仰卧位为佳,患肢保持中立位。膝下垫约 10cm 软枕。

2. 术后 24 小时可指导患者进行股四头肌的功能锻炼,患者仰卧,伸直两腿平放床上,待伸直膝关节后抬足跟距床面约 3cm,同时用力足背伸,每日 3~4 次,每次 20 分钟。

3. 减轻患肢肿胀:护士教会患者卧床时由远而近的向心性按摩患肢。每日 3 次,每次 10~15 分钟,平卧时患肢抬高 15°,有利于静脉血回流,减轻肿胀。

4. 适时调整固定架,使之保持固定架的杠杆应力。以上诸项开始几日由护士调整,而后教会患者自行调整。

5. 进针部位的护理:每周更换敷料 2 次,若局部有炎症反应可隔日更换敷料一次,并用红外线照射。停止下床活动,继续床上功能锻炼。

6. 指导患者进行功能锻炼。

7. 出院指导:出院时将患者的治疗情况,入院、出院及复查时间予以及时登记。同时以口头、护士示范动作、文字指导等形式方法进行出院指导。尤其交待功能锻炼的进行及进针部位的护理,复查时间及进行定期随访。

(收稿:1994-10-20)

## Abstract of Original Articles

### **Analysis on pre- and postoperative somatosensory evoked potentials of diastematomyelia**

Cheng Bin(程斌) Wang Kun-zheng(王坤正) Chen Jun-chang(陈君长) et al

*Second Affiliated Hospital of Xian Medical University (710004)*

Cortical somatosensory evoked potential (CSEP) examination stimulated from posterior tibial nerve were performed on 20 patients suffering diastematomyelia pre- and postoperatively, selecting 20 normal subjects as control group in the meanwhile. We found that CSEP changes were statistically significant between patients and normal subjects ( $P < 0.05$ ). Postoperative  $P_{40}$  peak latencies and amplitudes changed significantly in patients and CSEP had apparent difference in bilateral lower extremities preoperatively. It showed that CSEP is a sensitive, reliable objective diagnostic parameter that may be used to establish the severity of neural damage and evaluate the operative efficacy. The mechanism of neural defect is discussed in the article.

**Key words** Diastematomyelia Somatosensory evoked potential

(Original article on page 5)

### **Clinico-pathological study on juvenile spontaneous scoliosis**

Chen Zhong-qi(陈中奇) Yang Guang(杨广) Kong Xia(孔霞) et al

*First Hospital of Jining City, Shandong Province (272111)*

Thirty cases of spontaneous scoliosis were observed under light and ultra microscopic and immuno-histochemical examinations. The results indicated that the fascia, muscle of main depressive area of the trunk had adhesive degenerative phenomena, the pathological characteristics are infection, muscular fibrotic degeneration, connective tissue proliferation, adhesion and scar formation. It offers an objective foundation for comprehensive treatment.

**Key words** Scoliosis Ultrstructure Immuno-chemical histology

(Original article on page 7)

### **Influence of immuno-activity of cellular oxidation metabolic function of the external used Chinese herb during wound healing—Study on the mechanism of Wei Nong Zhang Rou(3)**

Li Xiu-lan(李秀兰) Ji Gen-yuan(纪根媛) Zhao Feng-yi(赵凤仪) et al

*Tianjin Institute of Orthopaedics (300211)*

Oxidation metabolic function of neutrophils, lymphocytes, exudate cells of wound surface and the influence of wound surface exudation on normal neutrophils and lymphocytes were detected by means of chemiluminescence-Cl during application of Chinese herbs on wound healing. The results of experiments indicated that external applying of Chinese herbs can activate neutrophils and lymphocytes to produce-Cl. The difference is very evident ( $P < 0.01$ ) as compared with control group. During wound healing neutrophils were activated at first then lymphocytes till healing stage. The exudation cells of the wound surface bears rather strong-Cl activity. Those of the ex-



ternal used Chinese herb group is superior than control group ( $P < 0.01$ ). Exudation of external applied Chinese herb group can serve as activator of neutrophils and lymphocytes, it bears similar action as zymosan and canavaline A. There is very weak action in control group.

**Key words** Trauma and injury Traditional Chinese medicinal therapy  
Immunology, cellular Wei Nong Zhang Rou

(Original article on page 9)

**Biomechanical principal and clinical application of the novel annular external fixator**

Huang Xiao-zhou(黄孝舟) Wang Yi-jin(王以进) Fan bin(凡道斌) et al  
*Chaohu District Orthopaedic Hospital, Anhui Province(238000)*

Since June of 1986, 184 cases including 146 cases of fresh fracture; 16 cases, chronic fracture; 4, non-union; 13, elongation of bone; 5, genu varum malformation were treated by self-made novel annular external fixator with satisfactory therapeutic effect. Various modes of fixation with this fixator were examined with biomechanics, it shows that various number of pins, types, directions and locations were related with stability of the fixation.

**Key words** Fracture fixator, external Biomechanics

(Original article on page 12)

**Analysis of remote therapeutic effect on surgical treatment of prolapse of lumbar intervertebral disc**

Ran Yong-xin(冉永欣) Dai Zhi-he(戴志和)  
*Central Hospital of Shanghai Railway Bureau(200072)*

From 1975 to 1994, 500 cases of prolapse of lumbar intervertebral disc were treated with fenestration operation of vertebral lamina and ligamentum flavum and total laminectomy two forms of operation. The results indicated that there is no difference between two forms of operation in the releasing of sciatic neuralgia. But the former bears advantage of minor injury, it can not only remove the prolapsed nucleus, removal of complex lesion around the disc and recovery of nervous function but also can maintain the stability of the spine. The rate of excellency and good is 98%.

**Key words** Prolapse of lumbar intervertebral disc Surgery, operation

(Original article on page 17)

**欢迎订阅本刊 1994 年增刊**

《中国骨伤》1994 年增刊(上、下集)已出版。增刊上集以临床为主,选题广泛,内容包括临床论著、实验研究、经验交流、外固定、手法介绍等。集中反映了骨伤科近年来的最新进展。每册定价 27.50 元(另加邮寄费 2.50 元)。

增刊下集为“脊柱性腰腿痛专集”。此刊汇集了参加 1994 年 10 月在浙江杭州市召开的“全国脊柱性腰腿痛专题学术讨论会”各位专家、学者的学术论文 150 篇。内容丰富,学术水平较高。每册定价 20.00 元(包括邮寄费)。

欲购者,请寄款至:100700 北京市东直门内北新仓 18 号《中国骨伤》编辑部收,务请写清收刊者详细地址、姓名及所在地邮政编码,注明“购 1994 年增刊及册数”。另外,本刊 1993 年增刊“骨科外固定专集”尚有余册,每册定价 25.00(含邮寄费)。