

经验交流

针拨法治疗掌指关节脱位 30 例

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摘要 掌指关节闭合性脱位由于解剖关系特殊,常须切开复位。本文介绍的闭合性克氏针撬拨法治疗掌指关节闭合性脱位 30 例,取得了满意的疗效。并阐明了针拨法的原理及操作方法。

关键词 掌指关节脱位 针拨法

闭合性掌指关节脱位较少见,食指外的其它指闭合性掌指关节脱位更为少见,由于解剖关系特殊,文献上认为须行切开复位。采用自行创用的闭合克氏针撬拨法治疗 30 例,效果优良,特报告如下。

临床资料

从 1983 年 10 月至 1995 年 10 月 12 年间采用闭合克氏针撬拨法治疗 30 例 32 指:其中拇指 9,食指 17,中指 6;男 26 例,女 4 例;年龄 16~57 岁,本组 30 例中除 5 例有皮肤擦破伤外,余无皮肤损伤;30 例中采用透视下撬拨者 12 例,采用徒手撬拨,术后摄片者 18 例。全部复位成功:其中一次撬拨成功者 25 例,透视下二次以上成功者 5 例。

操作方法

1. 麻醉:用臂丛麻醉或局部麻醉。本组除 8 例采用臂丛麻醉外,余 32 例皆采用局部麻醉。方法为掌侧皮肤“桔皮样皱纹”旁进针作指总神经阻滞及关节囊内注射。该“桔皮样皱纹”的形成是由于掌指关节脱位后,牵拉与掌指关节处腱膜有相连的皮下纤维组织和皮肤,下陷致使皮肤出现桔皮样皱纹。这也是掌指关节脱位的皮表体征(图 1)。



图 1

2. 器械:备消毒的 2mm 粗克氏针两枚。其中一枚克氏针头端予以磨成扁圆形,即做成“撬拨克氏针”,目的是避免撬拨时损伤关节软骨面及韧带。

3. 方法:常规患处消毒后,戴消毒手套,先取普

通锐头克氏针,从掌侧“桔皮样皱纹”处皮肤进针(图 1)。穿过皮肤,达掌骨头。作成软组织戳道。透视下,换取钝头撬拨克氏针,沿原戳道插入。然后沿掌骨头面轻轻滑入,达掌骨头背侧,可探及较坚韧的掌侧纤维

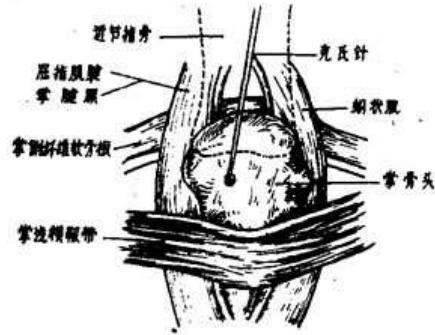


图 2

维软骨板(图 2)。这时撬拨针向掌骨头背近侧倾斜,即

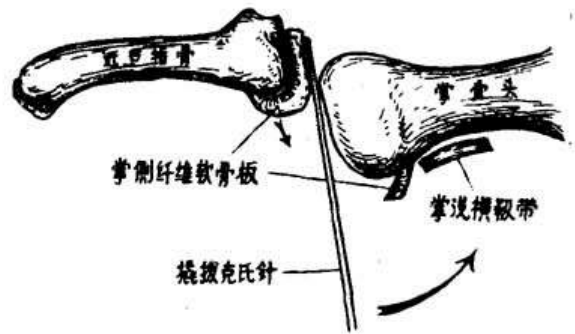


图 3

把该纤维板推向近节指骨关节面(图 3)。这时撬拨针与掌指关节面组成一杠杆系统,如图 3 所示,轻轻地向近端撬动克氏针,纤维板被撬拨针向下的力量拨出,脱位的掌指关节即可复位。这时,施术者往往可感到一个明显的弹跳复位声(图 4)。最后,透视下主、被动地活动该掌指关节,检查是否复位完全,并可同时牵除关节内残存的软组织。全部针拨操作,每个掌指关节 5~10

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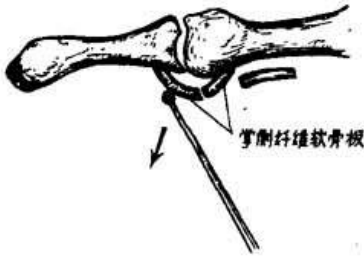


图 4

分钟即可完成复位。操作结束上石膏托固定 3~4 周。

在无透视条件时,或施术者比较熟悉时,勿需透视下复位,予复位前后摄片即可。

治疗结果

本组 30 例 32 指掌指关节闭合性脱位,采用本法治疗全部复位成功。随访 1~12 年,除 2 指功能稍受影响外,余 30 指功能基本或完全恢复,治疗的优良率为 93.7% (30/32)。随访过程中未发现针眼及深部组织感染者,亦未见有脱位曾有复发及术后遗留关节痛的病例。

讨 论

闭合克氏针撬拨法治疗掌指关节脱位的原理:在

应用解剖上,掌指关节囊掌面远端增厚、坚韧,形成掌侧纤维软骨板。而其近端部分薄且软,在掌指关节屈伸活动时,只近端部分有弛张改变。掌腱膜在掌指关节处形成二组横纤维。其中近侧者为掌浅横韧带。在手指伸直位时,掌侧暴力致掌指关节过度背伸,掌骨头突破掌侧近端关节囊薄弱部分,达皮下组织。近节指骨基底背侧脱位(图 2, 3)。这是从掌侧进针撬拨近节指骨向掌侧比较顺手的原因。本组 30 例中 28 例从掌侧进针;只有 2 例从背侧进针;该 2 例分别用 30 分钟和 50 分钟才复位成功。体会从“桔皮样皱纹”处进针是掌侧入针的捷径。掌指关节脱位后,屈指肌腱、掌腱膜被推向掌骨头尺侧。蚓状肌被推向桡侧。关节囊纤维软骨板移向掌骨头背面而隔开掌骨头及指骨,掌骨头掌面被掌浅横韧带卡住,用手法牵引复位时,此四边形的软组织卡压掌骨颈更紧张,故难以复位(图 2)。本撬拨法即是依此原理,把撬拨针插入此四边形,拨开卡于脱位关节间的纤维板,并扩大此四边形内界,通过杠杆牵引力,使脱位的掌指关节复位。

(收稿: 1996-03-01)

髌骨纵形骨折 10 例临床分析

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自 1985 年 2 月~1995 年 2 月,我们遇到 10 例髌骨纵形骨折报告如下。

临床资料 本组 10 例中男 8 例,女 2 例;年龄 20~58 岁;左侧 8 例,右侧 2 例;所有患者均为膝部着地造成;X 光膝关节正位片 2 例见髌骨外 1/3 有纵形骨折线,所有病例侧位片未发现异常,髌骨轴位片均可见髌骨外 1/3 纵形骨折,骨折断端分离 1~5mm。

治疗方法及效果 采用下肢前后石膏托将膝关节功能位固定,塑形时注意由外侧向中间挤压以利髌骨复位。1 例因髌骨断端分离错位,采用切开复位内固定术。4 周后拆除固定,开始功能锻炼。本组病随访 6 个月~3 年,平均 14 个月,膝关节功能均恢复正常。

讨论 髌骨纵形骨折为膝关节外翻扭伤后继续着力所致、股四头肌、髌骨、髌腱三者之间的关系基本正

常,伸膝装置不受明显影响。除髌骨处有明显压痛外,其他局部体征不明显。易于漏诊。髌骨纵形骨折处理不当,可发生创伤性关节炎。为减少漏诊和误诊率,我们在临床上体会到:(1)要详细询问受伤时的外力情况及摔倒时的着力部位。(2)检查压痛部位,在膝关节伸直位,在髌骨的内外缘的前部加压,造成骨折线分离,引起或加剧疼痛的患者,骨折的可能性较大。(3)拍髌骨轴位 X 线片,膝关节常规正位 X 线片上,由于髌骨为松质骨,位于股骨下段与骨密度程度相对较高的股骨髌重叠,骨折常显示不清。侧位片显示的是髌骨的侧面影像,而髌骨骨折线刚好与髌骨矢状面平行而表现为“正常”,造成误诊。髌骨轴位片才能确诊。髌骨轴位片对髌骨纵形骨折的诊断有着决定性的作用。

(收稿: 1996-03-21)

1997 年征订启事

《中国民间疗法》为双月刊,逢双月 28 日出版,每册定价 4.00 元,邮发代号 46-147,全国各地邮电局所均办理订阅,本刊也办理全年邮寄及零售杂志。本刊地址:北京市朝阳区东兴路七号《中国民间疗法》编辑部,邮编 100027,电话:(010) 64160882。

Abstract of Original Articles

Surgical treatment of the severe thoraco-lumbar burst fracture *Chen Fen-yong, Song Jian-rong, Lin Jia-jun, et al Union Hospital of Fujian Medical College (350001)*

The authors reported 51 cases of severe thoracolumbar burst fracture treated with surgery. According to Frankel grades, there were 13 cases of grade A, 7 cases of grade B, 14 cases of grade C, 5 cases of grade D and 2 cases of grade 3 in 11 cases, and total laminectomy decompression was done in 30 cases. The recovery rate was 73% in the incomplete paraplegia and 15.4% in complete paraplegia. It was concluded 1. Burst fractures mainly injure the middle column of the spinal cord, and spinal canal decompression as well as internal fixation should be done, if the fragments of vertebra had compressed about 1/3 of the spinal canal and the sagittal diameter of the later was less than 10 mm; 2. Internal fixation should be selected according to the condition and range of the injured vertebra, It is reasonable to choose the internal fixation procedure which can cause less injury of the spinal segment and get good results in reduction and fixation; 3. The recovery rate of the incomplete paraplegia group was significantly higher than that of the complete paraplegia group when surgical treatment was applied.

Key words Thoracolumbar vertebrae Burst fracture Surgical treatment

(Original article on page 3)

The following-up analysis on the patients with artificial hip-prosthesis *Zhai Ming-yu, Zhao Yu-gui, Wang Chun-ping, et al. Zhengzhou Hospital of Orthopaedics, Henan Province (450052)*

108 cases (112 hips), applied with artificial prosthesis have been followed up after operation, for the average years of 6.8. It was discovered that 37 cases of complication (about 33%) were produced due to the unproper operation; 46 cases of post-operational complication (41.1%); and the satisfactory therapeutic effective rate being about 74.1%.

The frequently encountered reasons and treatments of the various kinds of complications were put into stress

to be analysed and discussed in this paper.

KEY WORDS Artificial prosthesis Disease of the hip region

(Original article on page 5)

Study of the effect of intermittent compressive pressure to the osteoblasts in vitro. *Li Ke-xin, Shang Tian-yu, Dong Fu-hui, et al. Institute of Orthopaedics & Traumatology, Chinese Academy of TCM (100700)*

The experiment imitated the physiological changes of the cellular external circumstances, existed during skeletal functional movement, and supplied a intermittent compressive pressure (0.098 MPa, 15 minutes pressure, 15 minutes relax, 2 cycles/one hour, 8 hours/day) to the osteoblasts of experimental groups in vitro. It was discovered that the numbers of osteoblasts and the reaction of alkaline phosphatase in the experimental group were markedly elevated than that of the control groups. The results indicate that the intermittent compressive pressure is able to improve the proliferation and differentiation of the osteoblasts.

KEY WORDS Intermittent compressive pressure Osteoblast in vitro

(Original article on page 7)

Experimental research on the restoration of bone defect with the complex of heterogenous deproteinized bone and the bone morphogenetic protein. *Bai Meng-hai, Ge Bao-feng, Wang Yong, et al. Institute of Orthopaedics & Traumatology, Lanzhou General Hospital of the Military Region (730050)*

The failure of the implantation of the heterogenous deproteinized bone is always due to the intensive immune rejection. A new method for treating heterogenous bone was described in this paper. The bone of calf was deproteinized, i. e. extracted the main antigens and combined with bovine bone morphogenetic protein (BMMP) and then produced a kind of heterogenous deproteinized bone, not only without antigenicity, but also advantageous to the bone formation. Implanting this kinds of bone complex into the artificial defect (2cm) of the radius of Newzeland rabbit, the observation on the recovery with immunological, radioactive, and histological

methods, demonstrated that there was without any immune rejection in various kinds of experimental groups and there was indistinct margin between the implant and the fracture bed at 4th week; There were a great amount of lamella of new osteocytes and neogenetic vessels invasion into the implant, at the 8th week.

The experimental result indicates that the large heterogenous bone implantation, treated beforehand, can not only without any immune rejection, but also can achieve the expected restoration.

KEY WORDS Bone morphogenetic protein
Heterogenous bone implantation

(Original article on page 10)

Evaluation of the effect of ALQ on the experimental spinal cord injury, by means of evoked potential in the later.

pt. of Physiology, Anhui Medical University (230032)

Three kinds of experimental model of spinal cord injury (light, severe and complete) had been imitated in sixty rabbits and part of them were treated by autohemotherapy of light quanta (ALQ). The effect of ALQ on paralysis was observed and reported, by means of spinal cord evoked potential (SCEP), a reliable electrophysiological index. The results demonstrated that the percentage of the recovery of SCEP in the incomplete spinal injury of the treated group, was higher than that in the control group. It indicates that ALQ can promote the functional recovery of the spinal cord from the damage.

KEY WORDS Spinal injuries Evoked potential
Autohemotherapy

(Original article on page 13)

Techniques of needle manipulation for the treatment of metacarpophalangeal joint dislocation *Ren Qi-uang, Gao Min. Department of Orthopedics, The First Affiliated Hospital, Anhui Medical University (Hefei 230022)*

The closed dislocation of the metacarpophalangeal joint is not common. The open-reduction is often needed to be done, owing to the speciality of its anatomical relationship. Here an experience of close reduction in

success with prying and plucking manipulation, applied with Kirschner needle on 30 cases was introduced in this paper. The mechanism and procedure of this method was demonstrated with anatomical data, diagrams and typical cases and its practical value was also discussed.

KEY WORDS Prying and plucking manipulation with Kirschner needle Dislocation of metacarpophalangeal joint.

(Original article on page 15)

The Treatment of teno-skin suture on 54 cases of mallet finger deformity *Li Liang-dong, Fang Ming-zhi, Shen Jun, et al. First Affiliated Hospital, Guiyang College of Traditional Chinese Medicine (550001)*

54 cases of fresh and old mallet finger deformity have been treated with the combination of the teno-skin suture and small splinter fixation and achieved satisfactory therapeutic effect. Analysis, according to the characteristics of the anatomy and mechanics of this kind of operation, indicated that this pattern of operation is the first choice for the middle and old aged patients.

KEY WORDS Mallet finger Small splinter fixation

(Original article on page 17)

The Demonstration of the functional digits of brachial plexus roots avulsion. *Pei Lian-kui, Liang Bing-sheng, Zhang Jian-zhong.*

Department of Orthopaedics, Second Affiliated Hospital of Shanxi Medical College, Taiyuan (030001)

In 1993, we had reported the functional digits demonstrated at different parts of upper-limbs. Now we demonstrate the digits and percentages of function on the patients attacked with brachial plexus roots avulsion. The results indicate that the digital demonstration in the orthopaedics is an useful quantitative method to identify the injuries and curative effect on the patients and it is more standardized, objective and distinctive to evaluate the clinical curative effects.

KEY WORDS Functional digits Brachial roots avulsion Orthopaedics

(Original article on page 36)