

两组的平均差值有非常显著差异,但两组的绝对差值存在着交叉现象,所以对环枢关节错缝的诊断需要结合临床检查。我们认为可以参考以下几项:1. 患者有明显的头部或枕部疼痛,眩晕,恶心等症状;头颈转向某一侧时,症状加重;在枢椎的一侧椎板或横突处有明显压痛,并有高于对侧的隆起感。2. 开口位齿突侧块间距不等宽,差值 1mm 以上。3. 齿突与环椎轴线偏移 1mm 以上。4. 旋转 10~15 度开口位显示环枢间旋转运动异常。X 线平片对环枢关节错缝具有重要的参考价值,但不能作为唯一的诊断依据。另外需要指出的是,对那些有典型症状和体征者,即使齿突偏移小于 1mm 但旋转开口位显示环枢运动异常者,也应酌情行手法治疗。

X 线片可为手法的方向和方法提供明确的指示。

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张力带固定与钢丝环扎治疗髌骨骨折疗效分析

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摘要 使用张力带固定、钢丝环扎与丝线环扎治疗髌骨骨折共 65 例,平均优良率 91.52%,但优良疗效者张力带组是 80%,钢丝及丝线环扎组分别是 56%及 56.5%。张力带内固定术后不需石膏外固定,利于膝关节早期功能锻炼与康复,疗效明显优于其它两种疗效($p < 0.05$),但术中操作要求准确细致。与钢丝环扎相比,丝线环扎荷包缝合具有可避免取出内固定的第二次手术的优点,两组疗效相似。

关键词 髌骨骨折 内固定

髌骨骨折是一种常见的关节内骨折,治疗方法也较多,本文就我院 1986 年~1992 年手术内固定治疗的 65 例髌骨骨折报告如下:

临床资料

本组共 65 例髌骨骨折,单纯骨折且移位轻者以及严重的粉碎性骨折不包括在本组病例之内。本组均为单侧骨折。其中男 42 例,女 23 例;平均年龄 41 岁(22~66 岁);横形骨折 13 例、粉碎骨折 52 例;记载详细的 41 例中 34 例骨折的远端破碎 2~4 块,手术在骨折后 4 小时~3 周内施行。

手术方法

持续硬膜外麻醉,术式分为 3 种,将病例随机分为 3 组。①钢丝环扎固定 25 例,术后长腿石膏固定 4 周,去石膏后不负重练习膝关节屈

伸,6 周后扶拐行走。②10 号粗丝线荷包缝合 14 例,术后处理如钢丝环扎法。③张力带固定法 26 例,术中复位后沿髌骨上下极分别钻入两枚克氏针,该针垂直穿过骨折线,然后用 20 号钢丝环形或“8”字形围绕克氏针加压固定骨折,术后不做外固定;3 天后开始练习膝关节伸屈活动。3 种方法均认真修补骨折处破裂的髌韧带及股四头肌肌腱扩张部的破裂口。髌骨下极小的破裂碎片若不在关节面则应予切除,仅固定大的主要骨折块。

结果

随访病例时间最长者 5 年,最短者 8 个月,平均 3.4 年。根据有关文献^[1]术后疗效分为 4 级。即优:膝关节无疼痛,伸屈活动范围正常或减少 10°以内,无肌萎缩,行走自如。良:膝关节

无疼痛,屈膝活动范围减少 10°~30°,轻度肌萎缩,行走自如,下蹲稍差。可:有时膝疼,屈膝受限,但屈曲大于 90°,有肌萎缩,平地行走无跛行,上下楼及下蹲不便。差:有疼痛和肌萎缩,屈膝小于 90°,跛行,下蹲困难。

3 种手术方法治疗后平均优良率达 91.52%,疗效情况详见表 1,所有随访病例疗效差级者为 2 例,钢丝环扎组与丝线荷包缝合组各占 1 例。张力带固定组疗效优级者为 80%。钢丝环扎丝线荷包缝合两组优级者均为 56%。数据经 U 检验处理显示,张力带固定疗效明显优于其它两种方法(P<0.05)见表 2。

讨 论

内固定治疗髌骨骨折的原则是①骨折应解剖复位;②内固定物应可靠的固定在复位后骨块的位置直到骨愈合为止;③重建伸膝装置的连续性;④努力完全恢复膝关节的功能⁽²⁾。用钢丝环扎治疗髌骨骨折,术中可把骨折移位的髌骨重新拉在一起,但因钢丝环扎无法对抗骨折向前或向后的弯折力,所以术后必须用石膏外固定辅助才能达到可靠固定的目的。单用 10 号粗丝线荷包缝合固定髌骨骨折也不能牢固的固定骨折,必须配合石膏外固定才能保持骨折复位后不再移位。我们荷包缝合的 14 例髌骨骨折中,骨折复位固定后均未发生再次移位,而且用丝线环扎固定髌骨骨折可避免取出内固定物所需的第 2 次手术。因此我们认为丝线荷包缝合较钢丝环扎法优点更多。

表 1 内固定术后各组疗效分布

组别	例数	疗效分级			
		优	良	可	差
钢丝环扎	25	13	10	1	1
丝线缝合	14	8	4	1	1
张力带	26	21	4	1	0
合计	65	42	15	3	2

但是无论钢丝环扎还是丝线荷包缝合治疗髌骨骨折都必须辅以石膏外固定。这意味着术后早期不可能进行膝关节的伸屈活动,给膝关

节的功能锻炼及恢复带来影响。术后随访发现该两组病例疗效优级者仅占 56%,约 44%的病例膝关节功能受到不同程度的影响,其表现主要是膝关节的屈曲角度减少,股四头肌力减弱,老年患者尤为明显。

表 2 张力带固定与环扎、丝线缝合疗效对比

	张力带组	环扎缝合组	
优级病例	21	22	u=2.033
病例总数	26	39	(P<0.05)

应用张力带固定治疗髌骨骨折可将复位后的骨折坚实的固定。两根纵行的克氏针可以防止骨折向侧方或前后方向移位,环形或“8”字缠绕的钢丝能防止骨折的分离移位并能进行动态加压。因此术后没有必要进行石膏外固定,便于患肢及伤口的护理和功能锻炼,这是张力带固定治疗髌骨骨折突出的优点。该组患者膝关节功能恢复较好,伸屈活动范围明显优于钢丝环扎及丝线缝合组。

张力带固定不仅能治疗单纯的髌骨横断骨折,也适合治疗粉碎性髌骨骨折⁽³⁾。我们张力带治疗的病例多数是髌骨粉碎性骨折,骨折块多为 3~4 块,应用张力带可将其牢固的固定,术后可早期活动,疗效满意。

张力带固定治疗髌骨骨折的并发症并不少见,患者锻炼中膝关节屈曲超过 90°后常因克氏针尾部顶刺皮肤引起疼痛,对膝关节的屈曲活动有一定影响。约 40%的病人出现针尾部压痛⁽⁴⁾。其原因主要有:①术中克氏针针尾弯的勾过大,以至未能深埋;②术后克氏针松动,向近端游走并旋转。另一较常见的并发症是克氏针针尖在髌骨的远端引起皮肤刺疼。我们张力带固定组仅 2 例有髌骨远端刺疼,均在膝关节屈曲超过 100°后发生,但没有发生针尖刺破皮肤的现象。术中将克氏针针尖在髌骨远端仅留 0.3~0.5cm,过长部分予以剪除,避免了这一问题。但针尖留的过短时,环扎的钢丝有可能滑脱失去其固定作用。我们随访中发现 1 例因剪除过多,使环扎钢丝滑脱,克氏针向近端游离约 1cm,但幸好发生在骨折愈合之后。

以上 3 种方法均能有效的治疗髌骨骨折。与钢丝环扎相比,粗丝线荷包缝合能避免取出内固定物所需的 2 次手术,但这两种方法都必须辅以外固定,必然对膝关节功能恢复有一定影响。张力带固定可靠、坚固,术后对膝关节功能锻炼影响最小,也适用于髌骨粉碎性骨折,但操作需更准确细致。

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(收稿:1995-01-03)

丝线环绕缝合治疗髌骨骨折

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笔者自 1990 年 4 月~1994 年 5 月,采用丝线环绕缝合法治髌骨骨折 20 例,收到满意效果,现总结如下。

临床资料

本组 20 例中男 13 例,女 7 例;年龄 21~63 岁;左侧 9 例,右侧 11 例;伤后就诊时间 2 小时~9 天;横断骨折 9 例,上段骨折 4 例,下段骨折 3 例,粉碎骨折 4 例;车祸伤 5 例,跌伤 15 例,其中 3 例为多发性骨折,2 例为开放性骨折,18 例为闭合性骨折。

手术方法

手术的时间为伤后 5 天进行,开放性在 6 小时内进行。选用单侧腰麻或连续性硬膜外麻醉,并上气压止血带。取髌骨前横弧形切口,长约 12~16cm,依次切开皮肤、皮下组织。显露骨折端。吸去积血,并清理骨折断端的机化组织。用注射器抽取生理盐水,反复冲洗髌骨断端及关节腔。然后将骨折复位,在复位时注意保持髌骨关节面及上、下极的平整。如有游离的碎骨片,按原缺损部位放置。复位后,用两把布巾钳在髌骨的两侧钳夹,暂时固定。检查复位满意后,以 10[#] 丝线在距髌骨边缘 0.5~1cm 作环绕周边连续缝合髌前韧带和内外侧支持带,将丝线抽紧打结。再用 10[#] 丝线在骨折断端作间断缝合,加强固定。缝合完毕后,去掉布巾钳,检查固定牢靠,放松止血带,结扎出血点,冲洗后缝合切口。术后伸膝位无脚石膏托外固定。2 周拆线,7 天在床上做股四头肌练

习,5 周去除石膏托,开始作伸屈膝功能锻炼。

治疗结果

术后 X 线平片显示:骨折解剖复位 16 例,近似解剖复位 2 例,复位可 2 例。本组 20 例全部随访,时间 3 个月~26 个月,骨折愈合时间平均为 10 周,膝关节屈伸正常时间平均为 10 周。其中髌骨软骨面光滑,膝关节活动范围正常,无关节疼痛者 18 例,骨折面平整,行走时稍疼痛,下蹲轻度受限 1 例,总优良率达 95%。1 例病人因多发性骨折,离床活动时间晚,股四头肌轻度废用萎缩,伸膝无力,膝关节部分发僵,下蹲轻度受限,但是膝关节仍可屈 120°,伸 0°,不影响日常活动。

体会

髌骨骨折属关节内骨折,膝关节内有大量的积血,膝关节前侧肿胀、疼痛、活动受限。在治疗时,保证关节面的光整非常重要。我们采用丝线环绕缝合法,手术方法简便,取材容易,术后不必取出内固定物,减少了病人的痛苦。丝线缝合不必贯穿骨质,对组织无刺激,可减少创伤性关节炎的发生。通过观察随访,亦未出现丝线的异物不良反应。环绕缝合后,向髌骨中心形成合聚力,消除骨折断端的间隙,保持对位的稳定性,以利骨折愈合。在断端加强缝合,起到双重的固定作用。术后 7 天作股四头肌锻炼,可防止发生肌萎缩,保证膝关节的稳定,伸膝装置的功能恢复,以利日后活动。

(收稿:1994-11-28)

English Abstract

Radiographic findings of derangement of atlanto—axial joint

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Based on the radiographic study and analysis of atlanto—axial joint of normal and abnormal, we consider that the derangement of atlanto—axial joint can be diagnosed as: the difference of bilateral distance between the dens and the lateral mass is larger than 1mm, the difference of central sagittal line of dens and atlas is larger than 1mm; there is an abnormal movement of atlanto—axial joint on the X—ray film of open mouth with 15° rotation; and the patient bears the symptoms and signs of cervical spondylosis.

Key words Atlanto—axial joint Derangement of atlanto—axial joint X—ray film

(original article page 3)

Tension band and circular fixation in treating patellar fracture

Second Affiliated Hospital Of Xian University of Medical Science(710004)

Sixty five cases of fracture of patella were treated with tension band, circular fixation with stainless steel and circular fixation with silk thread, the average rate of excellent and good being 91.52%. In the excellent group, the tension band group was 80%, and the stainless steel and silk thread group being 56% and 56.5% respectively. Due to internal fixation with tension band do not need external fixation with plaster of paris, so it facilitates early knee joint exercise and rehabilitation. The therapeutic efficacy is superior than the other two methods ($P < 0.05$). It requires accurate and fine manipulation during operation. As compared with stainless steel circular fixation, silk thread circular fixation bears the advantage of avoiding another operation for withdrawing of the wire, though their therapeutic effect was in similarity.

Key words Fracture of patella Internal fixation

(original article page 5)

Clinical observation and animal experimental study on influence of electric effect in

bone remodelling

Academy of Science, Hubei Province (050081)

There is different explanation for the mechanism of the influence of electric effect in bone remodelling. Experimental study was carried on in observation of magnetic field in the influence of bone healing and electric current in bone remodelling. Through clinical observation and animal experiment, it indicates that electric effect can influence bone remodelling and promote bone healing.

Key words Electric effect Bone Bone remodelling

(original article page 8)

Transplantation of medial head of gastrocnemius muscle in treating old injury of posterior cruciate ligament

Guangdong Hospital of TCM, Guangdong College of TCM(510120)

since 1991, five cases (2 moderate instability, 3 severe instability) of old traumatic posterior cruciate ligament injury were treated with medial 1/3 to 1/2 of medial head of gastrocnemius muscle of the same side. Marked improvement of function (walking, quick working, going upstairs and downstairs, no instability) was found postoperatively, except there was a little bit sensation of instability (during rapid turning round or rapid stopping).

Key words Disposition of gastrocnemius muscle posterior cruciate ligament Injury of knee surgical operation Joint ligament

(original article page 10)

Treatment of avulsion fracture of tibial spine Luoyang Railway Hospital, Hunan province(471002)

In this article, 8 cases with an average of 14 years of age suffering avulsion fracture of tibial spine were reported. they were classified into 3 types, two of them were treated with conservative therapy; 6 of them, internal fixation with steel wire. Bony healing nearly normal joint function and satisfactory results were found in

all of these 8 followup cases. Classification and method of operation were introduced. Advantage of the operation, early diagnosis and mechanism of injury were discussed.

Key words Tibia Fracture peration
(original article page 11)

Improved Stimson's method in treating hip joint dislocation

Second College of Medical Science, Xi'an University of Medical Science(710004)

Seventy four cases of traumatic posterior dislocation of hip joint were reported in this article. Satisfactory clinical results were obtained after treatment with self--designed modified stimson manore duction. Method of reduction was introduced in detail, advantage of it was discussed.

Key words Traumatic posterior dislocation of hip joint Modified stimson's method
(original article page 12)

Characteristics of protrusion of L5S1 intervertebral disc (An analysis of 86 cases with symptoms and signs, myelogram, MRI, CT scanning

and operative findings)

General Hospital of Railway Construction Corporation of China(100043)

Eighty six operated cases of protrusion of lumbar intervertebral disc were reported. Among them, 29 cases (33.72%) were L5S1 level, next to L4, 5. The results show that the lower back pain in L5S1 level is more severe; for Laseque's sign, L5S1 level being $39.66^{\circ} \pm 18.46^{\circ}$; L4, 5, $49.90^{\circ} \pm 21.37^{\circ}$ ($P < 0.0284$). water soluble myelogram, MRI and CT scanning bear better diagnostic action though there were no difference statistically. But each examination bear their own benefit. There was significant difference between type and degree of two intervertebral disc space ($P < 0.013$, $P < 0.012$) being found in the operation. Lateral or extreme lateral position were found more in cases in level L5S1. It is realized that myelogram is the first choice, MRI or CT scanning should be added in doubtful cases. Lateral recess and nerve root canal should be carefully explored during operation.

Key words Protrusion of lumbar intervertebral disc L5S1 level
(original article page 29)

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