·论著·

脊髓背侧蛛网膜网带一例并文献复习

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【摘要】**目的** 探讨脊髓背侧蛛网膜网带的临床特征、影像学表现、诊断治疗,旨在提高临床医师对该病的认识。**方法** 对1例曾被误诊为腰腿痛疾病的脊髓背侧蛛网膜网带患者进行临床资料总结并复习国内外文献,对该病相关的特征及诊治进行总结。**结果** 该68岁女性患者以腰痛及双膝关节疼痛双下肢僵硬无力、活动不便为主要表现,来院就诊,经详细查体及系统检查后,腰椎及膝关节退行性改变不能全面解释该临床表现,而胸椎MR显示Ｔ６椎体水平脊髓受压变细,背侧局部蛛网膜下腔间隙增宽,呈“手术刀征”改变。结合临床体征,明确诊断并进行手术,术中所见胸髓背侧蛛网膜网带,压迫脊髓,给予切除蛛网膜网带后,脊髓膨隆,术后症状改善,病理学检查与术前诊断相符,随访病人恢复良好。**结论** 脊髓背侧蛛网膜网带是一种罕见的临床病变,影像学可表现出典型的特征,但该病病情发展迟缓,于老年人而言,易与退行性疾病所引起的临床症状相重叠,临床中容易被忽视,通过本例病例的回顾分析和相关文献复习,以加深对该疾病的认识,为临床工作提供参考,降低该病的漏诊、误诊率。

【关键词】脊髓背侧蛛网膜网带；手术刀征；脊髓受压；磁共振成像；退行性疾病；漏诊；误诊；
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Spinal Cord Dorsal Arachnoid Web: a Case Report and Literature Review

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Abstract: ***Objective*** To explore the clinical features, imaging manifestations, diagnosis and treatment of the spinal dorsal arachnoid web, with the aim of improving the understanding of this disease among clinical physicians. ***Methods*** Clinical data of a patient with thoracic spinal dorsal dorsal arachnoid web who was previously misdiagnosed as low back and leg pain disease were summarized, and domestic and foreign literature was reviewed to summarize the characteristics, diagnosis and treatment of the disease. ***Results*** The 68 year old female patient came to the hospital with the main manifestations of low back pain and pain in both knees, stiffness and weakness of both lower limbs, and difficulty in movement. After detailed physical examination and systematic examination, the degenerative changes in the lumbar spine and both knees could not fully explain the clinical manifestations. The thoracic spine MRI showed that the spinal cord at the level of T6 vertebral body was compressed and narrowed, and the local space of the subarachnoid space at the back was widened, presenting the "Scalpel sign" change. Combined with the clinical signs, a clear diagnosis was made and the operation was carried out. The arachnoid web at the back of the thoracic spinal cord seen during the operation compressed the spinal cord. After the arachnoid web was removed, the spinal cord swelled, and the postoperative symptoms improved. The pathological examination was consistent with the preoperative diagnosis. The follow-up patients recovered well. ***Conclusion*** The spinal cord dorsal arachnoid web is a rare clinical lesion with typical imaging features. However, the disease develops slowly, and is easy to overlap with the clinical symptoms caused by Degenerative disease in the elderly. It is easy to be ignored in clinical practice. Through the retrospective analysis of this case and the review of relevant literature, we can deepen the understanding of the disease, provide reference for clinical work, and reduce the rate of missed diagnosis and misdiagnosis of the disease.

Keywords: Dorsal Arachnoid Web; Scalpel Sign; Spinal Cord Compression; Magnetic Resonance Imaging; Degenerative Disease; Misdiagnosis; Misdiagnosis

脊髓背侧蛛网膜网带(dorsal arachnoid web,DAW)是一种非常罕见的临床病变,目前国内外只有少数病例报道。根据我院收治此病例的回顾性分析和相关文献复习,总结这类少见疾病的临床特点,以期提高临床医生对此病的认识,为临床工作提供参考,降低该病的漏诊、误诊率。

1 资料与方法

1.1 一般资料 患者 女, 68 岁,因双膝关节疼痛、双下肢僵硬无力、腰背部僵硬疼痛3 年入院。起初发病时患者以右侧膝关节内侧疼痛为主要临床表现,曾在当地医院以膝关节骨性关节病进行保守治疗,后逐渐出现双膝关节外侧疼痛、双下肢僵硬无力、躯体前倾、腰背部僵硬疼痛等症,以膝关节骨性关节病及腰椎退行性病变,给予对症保守治疗,均未见明显疗效,期间曾行影像学检查：双膝关节退行性改变,腰椎退行性改变。为求进一步诊治,遂来我院就诊。详细专科查体可见：患者上肢感觉运动正常,生理反射存在,病理反射未引出；患者下肢轻度屈髋、躯体前倾体态,双髋关节周围肌张力明显增高导致双侧髋关节活动受限,外旋尤甚,行走时,机械蹒跚步态,步履不稳,独自难以完成迈步上台阶、跨沟栏等动作,胸背部酸困疼痛,腰背部束带感,双下肢痛温觉轻度减退,双膝关节外侧疼痛,双足底痛觉过敏,双下肢肌张力显著增高,夜间时常出现双下肢肌痉挛,精细运动差,双侧肢体存在轻度的位置觉障碍,双下肢诸肌力4级。双侧膝腱反射亢进,双侧跟腱反射未引出,双侧髌阵挛弱阳性,双侧踝阵挛阴性,霍夫曼征、巴氏征阴性,鞍区皮肤感觉未见明显异常,大便控制力变差。

1.2 方法 完善系统检查后,于胸椎MRI发现异常,经多学科会诊后,明确诊断,行手术治疗。胸椎MRI平扫示：T6椎体水平脊髓前后径变窄,T6水平脊髓局部受压前移,脊髓局部T2WI信号稍增高,背侧局部蛛网膜下腔间隙增宽,呈手术刀征样改变。MRI诊断：T6椎体水平脊髓受压变细及变性,背侧局部蛛网膜下腔间隙增宽呈“手术刀征”改变,考虑脊髓背侧蛛网膜网带(图1)。

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2 结　果

2.1 在全麻下行胸椎后入路椎板切除减压、椎管内髓外硬脊膜下病变切除。取T5～T6椎体为中心,切除T5～T6棘突,超声骨刀沿两侧椎弓根内侧缘切除T5～T6中央椎板,暴露椎板下硬膜囊,切开背侧硬脊膜,以温氏钳向两侧牵开。术中可见 T6节段脊髓背侧覆盖增厚的网带状蛛网膜,包绕脊髓,呈暗白色(图2A),脊髓受压凹陷、变细。脑膜剪开增厚的蛛网膜,并在脊髓周围彻底松解包绕的蛛网膜网带,使脊髓减压,仔细保护脊髓表面的血管(图2B)。严密缝合硬膜囊,逐层缝合伤口。全程操作在神经电生理监测下进行。

2.2 术后引流未见脑脊液漏,术后3d拔出引流管,术后4d下床活动,患者腰背部束带感消失,下肢肌张力较术前明显降低,双髋关节活动度明显改善,恢复大部分外旋功能,膝关节疼痛明显减轻,下肢灵活性增加,精细运动明显改善,深感觉障碍较前有所好转,双足底痛觉过敏消失,步态较术前稳健,抬腿迈足动作较术前明显改善。病理学检查与术前诊断相符。随访2个月,患者临床症状进一步好转。

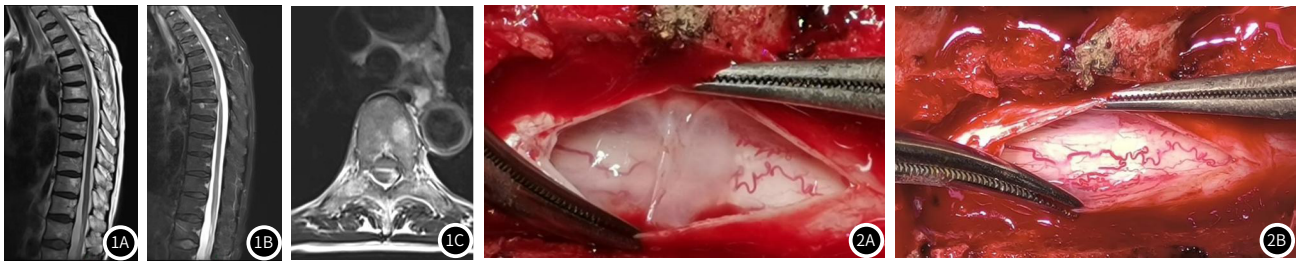

图1A～图1B 矢状位T_2WI、T_2WI脂肪抑制像示T6椎体水平脊髓受压变细、扭曲,背侧局部蛛网膜下腔间隙增宽呈“手术刀征”；**图1C** 横断位T_2WI示背侧蛛网膜下腔增宽,脊髓向前移位,可见脊髓背侧横向条索。**图2A** 术中脊髓表面及周围增厚的蛛网膜网带；**图2B** 术中切除蛛网膜网带后状态。

3 讨　论

脊髓背侧蛛网膜网带(dorsal arachnoid web,DAW)是一种位于髓外硬膜下的增厚的横行束带状蛛网膜组织,好发于中上段胸部脊髓,偶可见发生于颈髓的病例报道[1]。由于蛛网膜网带的牵拉作用,造成脊髓背侧局部受压凹陷和前移位,继发出现神经功能障碍,引起局部神经组织受压的症状,并可导致脑脊液的液体动力学改变。MRI作为首选诊断检查,关键特征为脊髓背侧脑脊液间隙增宽,脊髓的局灶性背侧凹陷和前移位,脊髓的腹面没有发生变形,矢状位MRI脑脊液间隙扩大的轮廓与手术刀的轮廓相似,被称之为“手术刀征”(scalpel sign),也可伴发出现“脊髓空洞”(syringomyelia)[2-4]。MRI上阳性“手术刀征”以及伴随脊髓空洞的存在对脊髓背侧蛛网膜网带有高度的诊断提示作用[5]。CT脊髓造影(CT myelogram)也可以作为替代,影像显示为脊髓背侧有特征性的局灶性凹陷,脊髓后脑脊液间隙变宽[6]。

笔者查阅国内外相关文献,此病尚无明确病因,但有文献报告背侧位置可能与后隔憩室形成蛛网膜囊肿的理论相似,脊髓背侧蛛网膜网带可能是不完整蛛网膜囊肿或是由塌陷的蛛网膜囊肿的壁组成的,可继发于蛛网膜组织破坏或炎症病变。蛛网膜网带会妨碍到脑脊液的流动以及影响脊髓的血液供应,脑脊液流动受阻则可能通过脊髓传递脑脊液压力或将压力反射到脊髓而形成空洞,脊髓空洞可发生于蛛网膜网带的近端或远端[7]。本病例未伴有脊髓空洞,可能是疾病早期不一定会形成脊髓空洞。查阅的相关报道中可见,男性患者比例多于女性,且三分之二病例伴有脊髓空洞[8]。

根据文献复习,脊髓背侧蛛网膜网带(dorsal arachnoid web,DAW)主要需要与脊髓背侧蛛网膜囊肿(dorsal spinal arachnoid cyst)及腹侧脊髓疝(ventral cord herniation)鉴别。三者皆为罕见的疾病,且三者临床症状相似,通过MRI影像学可以进一步明确诊断,脊髓背侧蛛网膜囊肿：脊髓平滑扇形,硬膜内脑脊液样信号囊状影,囊壁光滑,界限清楚,相应蛛网膜下腔增宽,脊髓受压移位；脊髓变形不太明显,即无手术刀征；且可发生在脊髓任何节段。腹侧脊髓疝：脊髓组织从腹侧硬膜缺损处突出,腹侧疝点的局部脊髓表面变形并脊髓前硬膜缺损突出是其典型的特征。典型MR矢状位可呈现脊髓腹侧的局部畸形,局部脊髓变细、成角,背侧蛛网膜下腔继发增宽,冠状位可呈现“C”形结节状改变,疝出部分呈“吸盘征”,轴位呈现“双脊髓征”[9]。

脊髓背侧蛛网膜网带的发病多以缓慢进展性趋势,临床表现主要有：背部疼痛；躯体束带感；下肢无力和感觉症状；反射亢进、痉挛性瘫痪、阵挛和张力亢进；步态不稳；行走困难等。在本病例中可见到,此患者病史较长,临床症状从初发的单侧膝关节的疼痛逐渐出现双膝关节疼痛、双下肢僵硬无力、腰背部僵硬疼痛等症,逐渐表现出明显的脊髓性临床体征。

脊髓背侧蛛网膜网带在治疗上,多数学者认为通过手术治疗,切除脊髓蛛网膜网带,改善脑脊液流动力学,恢复脊髓形态,阻断病情的进展,为神经功能的恢复创造条件,一般患者预后较好[10]。也有学者认为,对于无症状或轻症患者,可采取保守、动态观察等个体化治疗[11]。

通过本病例的回顾分析可以发现,在脊髓背侧蛛网膜网带患者的早期临床表现中可能脊髓性症状不明显,相对隐匿,多以肢体局部的症状为主,且老年患者常伴有脊柱及关节的退行性改变,早期临床上易误诊、漏诊,常以退行性病变给予治疗,疗效欠佳。在阶段性治疗后,如果患者症状改善不明显,甚至有所加重,需谨慎对待,应完善进一步检查,除常见病因外,需考虑到此病的可能。同时也建议临床科室及影像科室的医生加强对此病的认识,应能及时准确的识别“手术刀征”,这高度提示存在脊髓背侧蛛网膜网带,应及时进行会诊评估,以确定是否需手术治疗,切除蛛网膜网带或脊髓空洞分流术,这对患者的病情进展及预后至关重要[12]。如果误诊或漏诊此病,可能延误治疗时机,导致脊髓功能恶化。

综上所述,脊髓背侧蛛网膜网带是一种罕见的临床病变,影像学可表现出典型“手术刀征”的特征,但该病病情发展迟缓,于老年人而言,易与退行性疾病所引起的临床症状相重叠,临床中容易被忽视,本文旨在加深对该疾病的认识,为临床工作提供参考,降低该病的漏诊、误诊率。

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