

2006, 12:325-328.[谢长春, 高崇荣, 卢振和, 信文君, 周利君, 胡能伟, 刘先国. 不同频率脉冲射频对大鼠脊髓背角 C-纤维诱发电位长时程增强的影响[J]. 中国疼痛医学杂志, 2006, 12:325-328.]

[5] Erdine S, Yu cel A, Cimen A, Aydin S, Sav A, Bilir A. Effects of pulsed versus conventional radiofrequency current on rabbit dorsal root ganglion morphology [J]. Eur J Pain, 2005, 9:251-256.

[6] Abejon D, Ortega R, Solís R, Alaoui N, del Saz J, del Pozo C. Trans-facet-joint approach to pulsed radiofrequency ablation of the L5 dorsal root ganglion in a patient with degenerative spondylosis and scoliosis [J]. Pain Pract, 2008, 8:202-205.

[7] Rozen D, Ahn J. Pulsed radiofrequency for the treatment of ilioinguinal neuralgia after inguinal herniorrhaphy [J]. Mt Sinai J Med, 2006, 73:716-718.

(收稿日期:2018-08-21)

· 临床医学图像 ·

继发于脑桥缺血性卒中的双侧小脑中脚 Wallerian 变性

doi: 10.3969/j.issn.1672-6731.2018.10.014

Bilateral Wallerian degeneration of middle cerebellar peduncles secondary to pontine infarction

HAN Tong

Department of Neuroradiology, Tianjin Huanhu Hospital, Tianjin 300350, China (Email: mrbold@163.com)

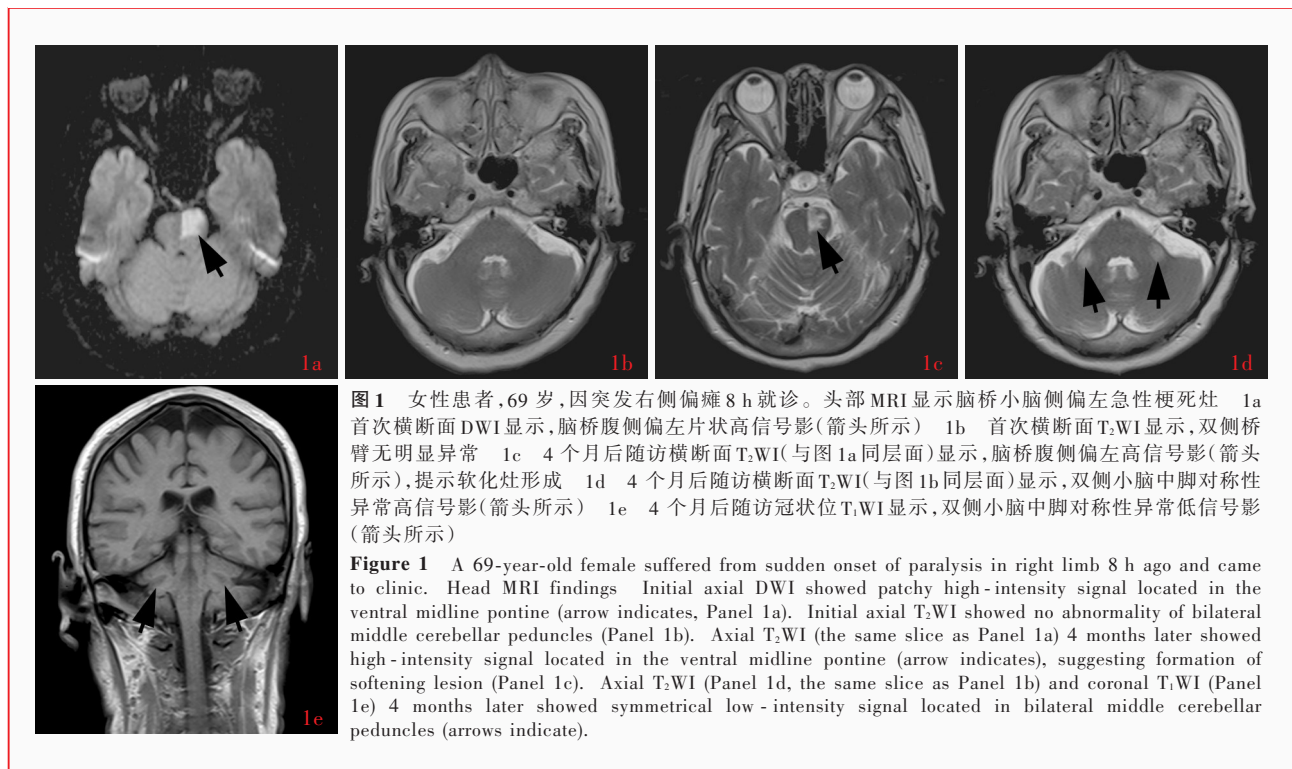


图 1 女性患者,69 岁,因突发右侧偏瘫 8 h 就诊。头部 MRI 显示脑桥小脑侧偏左急性梗死灶 1a 首次横断面 DWI 显示,脑桥腹侧偏左片状高信号影(箭头所示) 1b 首次横断面 T₂WI 显示,双侧桥臂无明显异常 1c 4 个月后随访横断面 T₂WI(与图 1a 同层面)显示,脑桥腹侧偏左高信号影(箭头所示),提示软化灶形成 1d 4 个月后随访横断面 T₂WI(与图 1b 同层面)显示,双侧小脑中脚对称性异常高信号影(箭头所示) 1e 4 个月后随访冠状位 T₁WI 显示,双侧小脑中脚对称性异常低信号影(箭头所示)

Figure 1 A 69-year-old female suffered from sudden onset of paralysis in right limb 8 h ago and came to clinic. Head MRI findings Initial axial DWI showed patchy high-intensity signal located in the ventral midline pontine (arrow indicates, Panel 1a). Initial axial T₂WI showed no abnormality of bilateral middle cerebellar peduncles (Panel 1b). Axial T₂WI (the same slice as Panel 1a) 4 months later showed high-intensity signal located in the ventral midline pontine (arrow indicates), suggesting formation of softening lesion (Panel 1c). Axial T₂WI (Panel 1d, the same slice as Panel 1b) and coronal T₁WI (Panel 1e) 4 months later showed symmetrical low-intensity signal located in bilateral middle cerebellar peduncles (arrows indicate).

Wallerian 变性系轴索顺行性崩解及其所属髓鞘变性的过程,是继发于神经元胞体和近端轴索损伤的退行性变,最常累及皮质脊髓束和皮质脑桥束,累及脑桥-小脑通路者并不少见,但鲜为人所熟知。脑桥小脑束起源于对侧脑桥核(位于脑桥基底部),接受皮质脑桥束的传入,在脑桥上部水平交叉过中线,经小脑中脚达小脑皮质。当损害发生在一侧脑桥时,同侧脑桥核、对侧脑桥小脑束和来自对侧脑桥核穿过该处的纤维束同时受累,故继发于单侧脑干缺血性卒中的 Wallerian 变性常累及双侧桥臂。首次 MRI 检查可见脑桥腹侧急性梗死灶(图 1a),而双侧小脑中脚正常(图 1b);发病 1~3 个月后可见脑桥基底部分侧软化灶形成(图 1c),双侧小脑中脚外上部对称性 Wallerian 变性,T₂WI 呈高信号,强度低于软化灶(图 1d),T₁WI 呈稍低均匀信号(图 1e),DWI 和 ADC 呈等或高信号。双侧小脑中脚 Wallerian 变性应注意与累及双侧桥臂的血管性病(缺血性卒中)、感染(病毒感染)、脱髓鞘病变(脱髓鞘病、进行性播散性脑脊髓炎)、退行性变(多系统萎缩、脊髓小脑共济失调、Creutzfeldt-Jakob 病),以及中毒性和代谢性疾病(毒品、低血糖脑病、肝豆状核变性、脑桥外中央髓鞘溶解)、自身免疫性疾病(免疫性脑炎、副肿瘤综合征)等相鉴别。首诊为脑桥中线旁病变的患者,随访时 MRI 出现对称性小脑中脚高信号,应考虑脑桥小脑束继发性 Wallerian 变性。

(天津市环湖医院神经放射科韩彤供稿)