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个案与短篇

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急性缺血性脑卒中早期磁共振弥散加权成像阴性1例

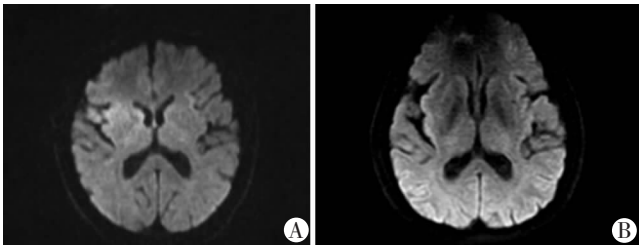
曹 笃,牟 君,魏有东,谢 鹏 (400016 重庆,重庆医科大学附属第一医院神经内科)

[**关键词**] 磁共振弥散加权成像;急性缺血性脑卒中;阴性
[**中图法分类号**] R743.304 [**文献标志码**] B

磁共振弥散加权成像(diffusion-weighted imaging, DWI)目前被认为是诊断急性缺血性脑卒中的"金标准",但近年国内外均有报道DWI首次诊断急性缺血性脑卒中可出现假阴性或阴性表现[1-2],但复查DWI多有异常发现。现报告早期2次DWI均未发现病灶的急性缺血性脑卒中1例。

1 临床资料

患者,男性,61岁,2013年4月2日凌晨因"突发右侧肢体无力,伴吐词不清6 h"入院。6 h前患者无明显诱因突发右侧肢体活动不灵,麻木,吐词不清,不伴头晕、头痛,意识丧失等。发现血压高1个月余,最高血压192/106 mmHg。吸烟20年,约40支/d,饮白酒20年,约150 mL/d。查体:血压182/94 mmHg。神清,吐词含糊。双侧瞳孔等大等圆,光敏。右侧鼻唇沟稍浅,伸舌右偏,示齿口角稍左偏。右侧肢体肌力Ⅲ级,左侧Ⅴ级。右侧偏身痛觉减退,右侧巴氏征阳性,余神经系统及心肺腹查体未见明显异常。入院诊断:①脑梗死,②原发性高血压3级(极高危)。NIHSS评分:9分。血脂:TG 2.30 mmol/L, LDL 2.95 mmol/L。入院当日头颅CT未见出血,头颈部CTA:双侧颈内动脉颅内段多发钙化,未见管腔明显狭窄;右侧颈总动脉分叉前走行迂曲,局部管腔稍狭窄;双侧大脑中动脉、后动脉远端管腔稍欠均匀。发病约36 h头颅MRI提示:双侧额叶、半卵圆中心、基底节区多发缺血灶,DWI未见急性梗死灶(图1A)。患者经阿司匹林、阿托伐他汀、疏血通及康复训练等治疗,第5天右侧肢体肌力及吐词不清症状较入院时好转,右下肢及上肢近端肌力Ⅳ级,远端Ⅲ级。继续抗血小板、改善循环及康复训练治疗,第8天右侧肢体肌力恢复至Ⅳ$^+$级,吐词基本清晰,遗留右侧偏身痛觉减退。同日复查头颅MRI,DWI仍未见急性梗死灶(图1B)。



A:2013年4月3日; B: 2013年4月9日
图1 左侧内囊急性梗死患者2次DWI阴性表现

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[**通信作者**] 谢 鹏, E-mail:xiepeng58@21cn.com
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2 讨论

由于DWI对细胞毒性水肿的高敏感性,使其可以发现超急性期的、小的及多发的病灶,目前仍是早期诊断急性缺血性脑卒中最敏感的成像方式[3]。目前大中型医院已基本将其作为常规扫描序列,使得急性缺血性卒中的确诊率大大提高,但DWI的敏感性并非100%[1-2]。

本例患者有吸烟、高血压等脑血管病危险因素,以突发右侧肢体无力伴吐词不清为主要表现,右侧偏身瘫痪、偏身痛觉减退及右侧巴氏征阳性等体征持续存在,病灶定位在左侧内囊,诊断为脑梗死。但患者病程36 h及第8天头颅磁共振DWI均未见高信号。

国内外报道DWI首次扫描阴性,复查后绝大多数可有异常发现,且以后循环为主。李烨琴[4]报道DWI早期假阴性可能与以下因素有关:①脑组织缺血的时间及程度:脑组织短时间及轻度缺血不足以引起细胞毒性水肿,未达到DWI弥散受限阈值,但此时可出现神经缺损症状;②梗死后的再灌注:脑梗死的超早期,由于梗阻血管再通或侧支循环代偿,梗死后组织的再灌注可使DWI弥散受限信号短时间恢复正常;③梗死的部位及面积:有研究者认为腔隙性及后循环脑梗死早期DWI可表现为阴性[2,5];④严重脑白质缺血及缺血预处理:由于大脑白质长期的亚临床缺血状态,使脑组织经历了长时间的缺血预处理,增强了其对缺血的耐受性,从而阻止了细胞毒性水肿的发生,导致早期DWI出现阴性表现[6]。Doubal等[2]还发现可能在年轻及女性患者中DWI更易表现为阴性。本例患者为常规MRI扫描,层面厚度为5 mm。王伟秀[7]研究发现3 mm薄层DWI可降低部分容积效应的影响,减少小病灶的遗漏,进而降低假阴性及增加小病灶显示率。

所以我们建议,临床上出现首次DWI扫描未发现病灶的疑似急性缺血性卒中患者,可复查DWI薄层扫描。在除外其他原因所致神经功能缺损症状后,如仍未发现病灶,亦不能否定急性脑梗死诊断而延误治疗,同时我们也期待关于急性缺血性脑卒中DWI早期阴性更深入的大样本研究。

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