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个案与短篇

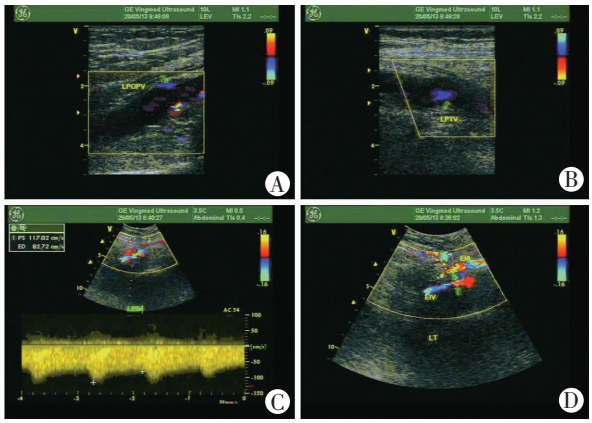
脊髓损伤后同时并发异位骨化和深静脉血栓 1 例

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[关键词] 脊髓损伤;异位骨化;深静脉血栓;碱性磷酸酶
[中图法分类号] R744 [文献标志码] B

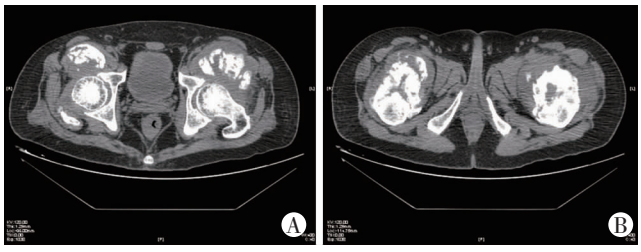
1 临床资料

患者,男性,50 岁,因“坠落致腰痛,双下肢感觉运动障碍 2 h”于 2012-12-30 入院。脊柱 CT 示 T_4爆裂性骨折,T_5压缩性骨折。2 d 后行切开复位和内固定术。术后 3 周开始康复治疗,患者 ASIA 脊髓功能损伤分级 A 级,神经平面 T_4,查体未见髋部、下肢红肿淤青以及骨折征象。患者常规康复训练和护理,伤后 12 周,患者双下肢出现麻胀感伴有疼痛(VAS 评分 6 分),服用洛芬待因、普瑞巴林后症状缓解。伤后 21 周,患者左侧小腿麻痛加重,2 周后出现左侧小腿明显肿胀,同时在康复治疗时触及双侧大腿根部软组织发硬,逐渐加重,并出现髋关节活动障碍。血清碱性磷酸酶(alkaline phosphatase,AKP)值从损伤后 33 d(146 U/L)开始增高,损伤后 4 个月(531 U/L)达到高峰,并一直维持较高水平。2013-05-20 及 2013-05-29 下肢血管多普勒彩超示左侧腘静脉及胫后静脉血栓(deep vein thrombosis,DVT)形成(图 1A、B),左侧髂外静脉远心端狭窄(图 1C、D)。2013-06-05 CT 示双侧髂前下棘及双侧股骨上段骨化性肿块影(图 2)。患者 T_4水平以下完全性脊髓损伤(spinal cord injury,SCI)后同时并发双侧髋关节、髂骨翼区、股骨上段异位骨化(heterotopic ossification,HO)和左侧腘静脉、胫后静脉 DVT 诊断明确,且其骨化灶对左侧髂外静脉静脉造成压迫,临床上较为少见。但本例未在第一时间确诊 HO 合并 DVT,给治疗带来困难,该患者进行了止痛、抗凝、轻柔被动活动及常规康复训练,患者小腿肿胀减退,大腿持续僵硬,周径减少不明显,HO 症状虽无加重,但康复效果不甚理想。



A、B:左侧胭静脉及胫后静脉,管腔明显增宽,其内被低回声及等回声充填,CDFI 示未探及明显血流信号;C、D:左侧髂外静脉远心段管腔变细,管腔内探及花色血流信号,流速明显增高达 117 cm/s

图 1 患者下肢脊髓损伤后 5 个月余下肢血管多普勒彩超示深静脉血栓形成



A、B:双侧髂前下棘内缘及股骨上端大量骨膜增生,软组织内不规则花斑状骨化影,边界较清,骨质破坏不明显,周围软组织明显肿胀

图 2 患者脊髓损伤后 5 个月余骨盆和下肢近端 CT 示异位骨化形成

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2 讨论

SCI患者并发DVT和HO的发生率分别1.59%及1.82%[1],两者同时出现的发生率低,国内外相关病例报道较少。HO早期易漏诊、误诊,DVT诊断往往早于HO。

通过本病例可以得到以下启示:①HO和DVT早期临床症状相似,病因尚不清楚,但可互为危险因素或加重另一并发症。SCI患者除使用抗凝药物治疗外,常主张早期采取按摩以及PT训练预防DVT的产生,但该预防措施可能成为诱发HO的危险因素。HO引起的组织水肿压迫深静脉使回流受阻,也可促进DVT的发生或使其加剧。②损伤程度越严重,并发HO的危险性越大,多见于ASIA A级或B级。HO好发外周大关节,以髋关节最为多见,部分患者可双侧受累[2]。③AKP虽无判定HO成熟与否的特异性,但其灵敏性高,比影像学阳性反应更早,可鉴别早期HO与其他炎性病变。HO患者骨生成活跃时,AKP水平增高;骨化停止时恢复正常。通常AKP在HO症状出现前平均8周开始增高,出现临床症状后3周达到高峰,以后逐渐降低,约5个月恢复正常。若大量骨形成,AKP水平可长期维持较高水平,反之,少量骨形成时,AKP可无异常。除AKP以外,有报道观察指出C反应蛋白、肌酸激酶对于HO诊断也具有一定特异性[3-4]。④HO的影像学表现与临床表现和病理改变密切相关,不同阶段具有不同的影像学特点[5]。磁共振能早期发现HO关节周围组织肿胀及其内信号改变,为诊断早期HO的首选方法;X线与CT检查可用于随访和复查。静脉造影可发现静脉血栓形成、异位骨压迫血管结构,可用于鉴别诊断HO和DVT,但应注意不排除同时并发的可能性。⑤主被动运动是非急性期HO和DVT患者的必要治疗手段,部分医师与治疗师不采用PT手法,仅局部理疗,以避免产生HO危险因素和DVT栓子脱落造成栓塞风险。早期研究[6]表明被动活动有利于改善ROM而无使HO恶化的证据。近年来Anderson等[7]报告显示DVT急性期的患者完全卧床休息和早期活动在导致栓塞风险和再次发生DVT风险上差异无统计学意义,且有其他益处。故治疗中应采取适度的手法,不增加骨化的同时恢复关节活动度。近年来,非甾体类抗炎药物与放射性治疗被认为是预防HO的两种主要方法[8-9],但其时机以及适应证仍不明了,且对已形成的HO没有作用,同时,如何消除有些治疗方法影响骨愈合的不良反应仍需进一步研究解决。

目前尚无治愈HO的特异性方法,预后差。对伴有外伤史的SCI患者,应当在密切注意DVT发生的同时注意是否发生HO,常规监测AKP值,出现疑似症状选择该阶段相应的影像学检查进行确诊及鉴别,做到全面预防,早期消除危险因素,减少并发症及其共存的概率,以达到最好的康复效果。

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