



骨质疏松性椎体压缩骨折在退变性脊柱侧凸的分布及危险因素

马雷,王辉,丁文元,杨大龙,张迪,孙亚澎,张为,申勇

050051 石家庄,河北医科大学第三医院脊柱外科,河北省骨科生物力学重点实验室

Prevalence of osteoporotic vertebral compression fracture in degenerative scoliosis and its features

Ma Lei, Wang Hui, Ding Wenyuan, Yang Dalong, Zhang Di, Sun Yapeng, Zhang Wei, Shen Yong

Department of Spine Surgery, the Third Hospital of Hebei Medical University, Shijiazhuang 050051, China

- 摘要
- 图/表
- 参考文献
- 相关文章

全文: [PDF](#) (932 KB) [HTML](#) (1 KB) 输出: [BibTeX](#) | [EndNote](#) (RIS) [背景资料](#)

摘要 目的 总结骨质疏松性椎体压缩骨折在退变性脊柱侧凸中分布的规律性,分析退变性脊柱侧凸患者发生椎体压缩骨折的危险因素。方法 回顾性分析2004年7月至2012年7月治疗136例退变性脊柱侧凸患者资料,根据术前是否发生骨质疏松性椎体压缩骨折分为骨折组和无骨折组。骨折组34例,男9例,女25例;年龄(71.7±1.7)岁。无骨折组102例,男23例,女79例;年龄(63.3±6.7)岁。采用视觉模拟评分(visual analogue scale, VAS)评估胸背部疼痛程度,采用双能X线骨密度仪测定骨密度T值,测量侧凸Cobb角,观察侧凸范围内骨折发生情况。采用二分类Logistic逐步回归分析方法筛选出骨折发生的危险因素。结果 骨折组发生T₁₁骨折3例, T₁₂骨折12例, L₁骨折15例, T₁₂及L₁两个椎体骨折4例。无骨折组平均年龄低于骨折组(t=17.20, P<0.001),两组的性别组成并无差异($\chi^2=0.218$, P=0.641),胸背部疼痛的VAS评分小于骨折组(t=9.30, P<0.001),侧凸Cobb角与骨折组相比无差异(t=1.84, P=0.08),骨质疏松的严重程度低于骨折组(t=5.63, P<0.001),骨桥发生率低于骨折组($\chi^2=12.333$, P<0.001)。Logistic回归分析显示外伤史(OR=1.36; 95%CI, 1.09~2.11)、骨桥形成(OR=3.31; 95%CI, 2.10~5.38)、骨质疏松(OR=2.45; 95%CI, 1.58~4.36)会增加退变性脊柱侧凸患者发生骨质疏松性椎体压缩骨折的机会。结论 在退变性脊柱侧凸患者中,骨质疏松性椎体压缩骨折好发于胸腰段椎体,外伤史、骨质疏松以及侧凸范围内骨桥形成是骨折发生的危险因素。

关键词: 骨质疏松性骨折 脊柱侧凸 骨折,压缩性

Abstract: Objective To explore the prevalence of osteoporotic vertebral compression fracture in degenerative scoliosis and its risk factors. Methods One hundred and thirty-six cases of degenerative scoliosis were retrospectively reviewed from July 2004 to July 2012. According to the occurrence of vertebral compressive fractures, patients were divided into two groups: the case group (fracture) and control group (non-fracture). There were 34 patients with an average age of 71.7 years in case group and 102 patients with an average age of 63.3 years in control group. We used visual analogue scale (VAS) to assess the back pain, and measured Cobb angle to evaluate the severity of scoliosis. Bone mineral density (BMD) and osteophyte were also analyzed. Logistic analysis was used to explore the risk factors of fracture. Results In case group, there were T₁₁ vertebral fracture in 3 cases, T₁₂ vertebral fracture in 12, L₁ vertebral fracture in 15, and both T₁₂ and L₁ vertebral fracture in 4. The average age of case group was higher (t=17.20, P<0.001) while VAS score was higher than control group (t=9.30, P<0.001). There was no statistical difference in sex ($\chi^2=0.218$, P=0.641) or Cobb angle (t=1.84, P=0.08) between two groups. Osteoporosis was less severe (t=5.63, P<0.001), and lower incidence of osteophyte was found in control group ($\chi^2=12.333$, P<0.001). Logistic analysis showed that trauma history, osteoporosis and osteophyte formation were risk factors. Injury (OR=1.36; 95%CI, 1.09-2.11), bony bridge (OR=3.31; 95%CI, 2.10-5.38) and osteoporosis (OR=2.45; 95%CI, 1.58-4.36) may increase risk of fracture. Conclusion Osteoporotic vertebral compression fracture usually occur in thoraco-lumbar region in patients with degenerative scoliosis. Trauma history, osteoporosis and bony bridge are risk factors of osteoporotic vertebral compression fracture

Key words: Osteoporotic fractures Scoliosis Fractures, compression

服务

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ E-mail Alert
- ▶ RSS

作者相关文章

- ▶ 马雷
- ▶ 王辉
- ▶ 丁文元
- ▶ 杨大龙
- ▶ 张迪
- ▶ 孙亚澎
- ▶ 张为
- ▶ 申勇

引用本文:

马雷,王辉,丁文元等. 骨质疏松性椎体压缩骨折在退变性脊柱侧凸的分布及危险因素[J]. 中华骨科杂志, 2014, 34(1): 19-23.

Ma Lei,Wang Hui,Ding Wen Yuan et al. Prevalence of osteoporotic vertebral compression fracture in degenerative scoliosis and its features[J]. Chin J Orthop, 2014, 34(1): 19-23.

链接本文:

http://www.chinjorthop.com/Jwk_zhgz/CN/10.3760/cma.j.issn.0253?2352.2014.01.004 或

http://www.chinjorthop.com/Jwk_zhgz/CN/Y2014/V34/I1/19

没有找到本文相关图表信息

- [1] Kanis JA, McCloskey EV, Johansson H, et al. Case finding for the management of osteoporosis with FRAX--assessment and intervention thresholds for the UK[J]. Osteoporos Int, 2008, 19(10): 1395?1408 
- [2] 中华医学会骨科学分会. 骨质疏松骨折诊疗指南(2008版) [J]. 中华骨科杂志, 2008, 28(10): 1001?1003
- [3] Melton LJ 3rd. How many women have osteoporosis now[J]? J Bone Miner Res, 1995, 10(2): 175?177
- [4] Daubs MD, Lenke LG, Bridwell KH, et al. Decompression alone versus decompression with limited fusion for treatment of degenerative lumbar scoliosis in the elderly patient[J]. Evid Based Spine Care J, 2012, 3(4): 27?32 
- [5] Li FC, Chen QX, Chen WS, et al. Posterolateral lumbar fusion versus transforaminal lumbar interbody fusion for the treatment of degenerative lumbar scoliosis[J]. J Clin Neurosci, 2013, 20(9): 1241?1245 
- [6] Ha KY, Son JM, Im JH, et al. Risk factors for adjacent segment degeneration after surgical correction of degenerative lumbar scoliosis[J]. Indian J Orthop, 2013, 47(4): 346?351 
- [7] 丁文元, 曹来震, 申勇, 等. 退变性腰椎侧凸形成和发展的相关因素分析[J]. 中华骨科杂志, 2011, 31(5): 404?408
- [8] Vanderpool DW, James JI, Wynne?Davies R. Scoliosis in the elderly[J]. J Bone Joint Surg Am, 1969, 51(3): 446?455
- [9] Daffner SD,Vaccaro AR. Adult degenerative lumbar scoliosis[J] Am J Orthop (Belle Mead NJ), 2003, 32(2): 77?82
- [10] Weidenbaum M. Considerations for focused surgical intervention in the presence of adult spinal deformity[J]. Spine (Phila Pa 1976), 2006, 31(19 Suppl): S139?143
- [11] Xing D, Ma JX, Ma XL, et al. A meta?analysis of balloon kyphoplasty compared to percutaneous vertebroplasty for treating osteoporotic vertebral compression fractures[J]. J Clin Neurosci, 2013, 20(6): 795?803 
- [12] 王岩. 骨质疏松性椎体压缩骨折的微创治疗[J]. 中华创伤骨科杂志, 2004, 6(9): 995?998
- [13] Werner CM, Osterhoff G, Schlickeiser J, et al. Vertebral body stenting versus kyphoplasty for the treatment of osteoporotic vertebral compression fractures: a randomized trial[J]. J Bone Joint Surg Am, 2013, 95(7): 577?584 
- [14] Dragan SF, Urbański W, Zywirski B, et al. Kyphosis correction after vertebroplasty in osteoporotic vertebral compression fractures [J]. Acta Bioeng Biomech, 2012, 14(4): 63?69
- [15] Robin GC. Scoliosis in the elderly: idiopathic or osteoporotic[J]? Clin Orthop Relat Res, 1986(205): 311?312
- [16] Horner HA, Urban JP. 2001 Volvo Award Winner in Basic Science Studies: Effect of nutrient supply on the viability of cells from the nucleus pulposus of the intervertebral disc[J]. Spine (Phila Pa 1976), 2001, 26(23): 2543?2549 
- [17] 王辉, 王艳红, 丁文元, 等. 骨性结构参数的不对称变化在腰椎侧凸角度进展中的意义[J]. 中国骨与关节杂志, 2013, 2(2): 65?69
- [18] Healey JH, Lane JM. Structural scoliosis in osteoporotic women [J]. Clin Orthop Relat Res, 1985(195): 216?223
- [19] 彭宝淦, 侯树勋, 施杞, 等. 椎体骨赘形成机理的研究[J]. 中华外科杂志, 2002, 40(3): 186

- [1] 龚遂良,陈宝,范顺武,赵凤东. 椎体内裂隙样变对经皮椎体后凸成形术疗效的影响[J]. 中华骨科杂志, 2014, 34(1): 6-12.
- [2] 赵汝岗,唐海,杨帆,陈浩,贾璞,包利,冯飞,杨鹤,张湛金. 椎体骨折2周与4周内行椎体后凸成形术后疗效的比较研究[J]. 中华骨科杂志, 2014, 34(1): 13-18.
- [3] 陈宝,陈国俊,龚遂良,黄成龙,范顺武. 降钙素在老年不稳定型股骨转子间骨折应用[J]. 中华骨科杂志, 2014, 34(1): 24-28.
- [4] 纪泉,赵立连,石磊,张良,王林,文良元,薛庆云. 唑来膦酸对骨质疏松性股骨转子间骨折作用效果分析[J]. 中华骨科杂志, 2014, 34(1): 29-32.
- [5] 李方财,陈其昕,陈维善,陈刚. 腰椎退行性侧凸患者脊柱矢状位参数与骨盆参数的相关性[J]. 中华骨科杂志, 2013, 33(9): 928-934.
- [6] 陈红卫,张根福,潘俊,赵钢生,俞光荣. 改良前外侧入路胫骨近端锁定加压钢板固定治疗胫骨平台后外侧骨折[J]. 中华骨科杂志, 2013, 33(9): 935-940.
- [7] 庄岩,刘清华,陶凯,付亚辉,张堃,季文婷,王谦,贺宝荣,王鹏飞. 髋白后柱解剖形态的三维重建模型研究[J]. 中华骨科杂志, 2013, 33(9): 948-953.
- [8] 郝定均,贺宝荣,刘团江,惠华,李辉. 脊柱截骨治疗先天性脊柱侧凸合并脊髓纵裂畸形的安全性和近期疗效[J]. 中华骨科杂志, 2013, 33(8): 803-808.
- [9] 王淑丽,马信龙,徐卫国,潘涛,张晓光,崔壮. 外踝骨折后三角韧带损伤程度的X线与MRI比较研究[J]. 中华骨科杂志, 2013, 33(8): 834-841.
- [10] 李晖,李清,杨风顺,侯波,郑永发,冯世庆. 多模式镇痛对老年髋部骨折术后谵妄影响的研究[J]. 中华骨科杂志, 2013, 33(7): 736-740.

- [11] 苏云山,任栋,王鹏程. 脊柱Denis B型骨折行单节段与双节段融合后生物力学强度比较[J]. 中华骨科杂志, 2013, 33(7): 748-754.
- [12] 孙军战,郑国海,赵克义. 微创空心螺钉髓内固定治疗锁骨骨折[J]. 中华骨科杂志, 2013, 33(7): 695-700.
- [13] 石岩,王生介,钱臣,赵金坤,恽常军,谭红略,周琦,赵小灵,吴骊东. 子母螺钉固定治疗Regan-Morrey II型尺骨冠突骨折[J]. 中华骨科杂志, 2013, 33(7): 701-707.
- [14] 辛景义,曹红彬. 克氏针辅助闭合复位治疗难复性股骨颈骨折[J]. 中华骨科杂志, 2013, 33(7): 708-713.
- [15] 张文龙,王玉峰,王良,王立杰,焦成. 闭合复位克氏针横向固定治疗第5掌骨基底骨折[J]. 中华骨科杂志, 2013, 33(7): 714-718.

友情链接



版权所有 © 2012 中华骨科杂志

地址:天津市河西区解放南路406号天津医院内 邮编:300211

电话: 86-22-28334734 86-22-28278929 传真: 86-22-28241184 E-mail: gktougao@126.com

本系统由北京玛格泰克科技发展有限公司设计开发