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肛提肌损伤与盆腔器官脱垂程度相关性的静、动态MR成像

Static and dynamic MRI evaluation on the correlation between levator ani deficiency and severity of pelvic organ prolapse

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中文摘要:

目的 探讨静、动态MRI研究肛提肌损伤与盆腔器官脱垂 (POP) 程度之间相关性的价值。**方法** 经临床POP-Q诊断为POP的患者45例 (POP组), 分为: 轻度 (I度) POP亚组、中重度 (II~IV度) POP亚组, 对照组为20名症状志愿者, 分别行静态及动态盆底MR检查, 比较对照组及POP组、不同POP亚组间肛提肌各测量指标的差异, 并采用基于MRI的评分系统比较各组间肛提肌损伤的差异。**结果** 对照组与POP组比较, 静息及用力状态的M线、双侧髂尾角、肛提肌裂隙的前后径、横径及面积, 静息状态双侧耻骨直肠肌厚度以及用力状态H线的差异均有统计学意义 (P均<0.05); 轻度与中重度POP亚组比较, 静息及用力状态的H线及M线、肛提肌裂隙的横径及面积、右侧髂尾角, 静息状态的左侧耻骨直肠肌厚度以及用力状态的提肌板角的差异均有统计学意义 (P均<0.05); 对照组及轻度、中重度POP组间肛提肌损伤程度的差异具有统计学意义 (P<0.001)。**结论** POP患者存在肛提肌形态及功能改变, 肛提肌损伤与POP程度相关。

英文摘要:

Objective To investigate the association between levator ani deficiency and pelvic organ prolapse (POP) using static and dynamic magnetic resonance imaging (MRI). **Methods** Forty-five women with POP (POP group) and twenty normal women (control group) underwent static and dynamic MRI for the pelvic floor. The POP group was divided into two subgroups by the severity of prolapse: Minor POP subgroup (I stage), moderate to severe POP subgroup (II-IV stage). The levator ani parameters between the POP group and the control group, between the POP groups of different stages were compared. The scoring system of the levator ani muscle based on the MRI was used for comparing the differences of the total scores distribution of the three groups. **Results** Comparing the POP group and control group, there were significant differences between the M line, levator plate angle, bilateral iliococcygeal angles, also the length, width and area of levator hiatus at rest and at straining status, as at the rest status of the thickness of bilateral puborectalis, at the straining status of the H line (all P<0.05). Comparing minor POP subgroup and moderate to severe POP subgroup, there were significant differences between the H line and M line, the width and area of levator hiatus, the right iliococcygeal angle at rest and straining status, as the thickness of left puborectalis at rest, the levator plate angle at straining status (all P<0.05). There was significant difference among minor POP subgroup, moderate to severe POP subgroup and control group according to the distribution of the severity of the levator ani muscle deficiency (P<0.001). **Conclusion** POP patients have the morphological and functional changes of the levator ani muscle, levator ani deficiency is associated with clinically significant prolapse.

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参考文献(共18条):

- [1] 朱兰, 郎景和. 盆底器官脱垂治疗应注意的几个问题. 中华妇产科杂志, 2011, 46(3): 561-563.
- [2] DeLancey JO, Kearney R, Chou Q, et al. The appearance of levator ani muscle abnormalities in magnetic resonance images after vaginal delivery. *Obstet Gynecol*, 2003, 101(1): 46-53.
- [3] Fielding JR. Practical MR imaging of female pelvic floor weakness. *Radiographics*, 2002, 22(2): 295-304.
- [4] Antonio ARJ, Renee B, Mona M, et al. Levator ani subtended volume: A novel parameter to evaluate levator ani muscle laxity in pelvic organ prolapse. *Am J Obstet Gynecol*, 2012, 206(3): 244.e1-9.
- [5] Ashton-Miller JA, DeLancey JO. Functional anatomy of the female pelvic floor. *Ann NY Acad Sci*, 2007, 1101: 266-96.
- [6] Morgan DM, Kaur G, Hsu Y, et al. Does vaginal closure force differ in the supine and standing positions? *Am J Obstet Gynecol*, 2005, 192(5): 1722-1728.
- [7] Shafik A, Doss S, Asaad S. Etiology of the resting myoelectric activity of the levator ani muscle: Physioanatomic study with a new theory. *World J Surg*, 2003, 27(3): 309-314.
- [8] Madill S, Tang A, Pontbriand-Drolet S, et al. Comparison of two methods for measuring the pubococcygeal line from sagittal-plane magnetic resonance imaging. *Neurourol Urodyn*, 2011, 30(8): 1613-1619.
- [9] DeLancey JO, Morgan DM, Fenner DE, et al. Comparison of levator ani muscle defects and function in women with and without pelvic organ prolapse. *Obstet Gynecol*, 2007, 109(2): 295-302.
- [10] DeLancey JO, Sørensen HC, Lewicky-Gaup C, et al. Comparison of the puborectal muscle on MRI in women with POP and levator ani defects with those with normal support and no defect. *International Urogynecology Journal*, 2011, 23(1): 73-77.
- [11] Walters MD, Karram MM, 著, 王建六, 译. 妇科泌尿学与盆底重建外科. 3版. 北京: 人民卫生出版社, 2008: 17-29.
- [12] Fielding JR. Practical MR imaging of female pelvic floor weakness. *Radiographics*, 2002, 22(2): 295-304.

- [13] Fielding JR, Dumanli H, Schreyer AG, et al. MR-based three dimensional modeling of the normal pelvic floor in women: Quantification of muscle mass. *AJR Amj Roentgenol*, 2000,174(3):657-660.
- [14] Ghazaleh R, Dena W, Aparna H, et al. Levator ani deficiency and pelvic organ prolapse severity. *Obstet Gynecol*, 2013,121(5):1017-1024.
- [15] Cai XR, Qiu L, Wu HJ, et al. Assessment of levator ani morphology and function in asymptomatic nulliparous women via static and dynamic magnetic resonance imaging. *Int J Gynaecol Obstet*, 2013,121(3):233-239.
- [16] Chen L, Ashton-Miller JA, et al. A 3D finite element model of anterior vaginal wall support to evaluate mechanisms underlying cystocele formation. *J Biomech*, 2009,42(10):1371-1377.
- [17] Kearney R, Fitzpatrick M, Brennan S, et al. Levator ani injury in primiparous women with forceps delivery for fetal distress, forceps for second stage arrest, and spontaneous delivery. *Int J Gynaecol Obstet*, 2010,111(1):19-22.
- [18] Kearney R, Miller JM, Ashton-miller JA, et al. Obstetric factors with levator ani muscle injury after vaginal birth. *Obstet Gynecol*, 2006,107(1):144-149.

相似文献(共20条):

- [1] 崔璨,程悦,沈文,吴彦洪.女性盆腔器官脱垂病人肛提肌的MRI评价[J].*国际医学放射学杂志*,2015(2):148-151.
- [2] Ke Guizhu,宋岩峰,Chen Ziqian,马明.盆底器官脱垂患者肛提肌的动态MRI研究[J].*现代妇产科进展*,2008,17(7):525-529.
- [3] 蔡香然,刘琼,罗新,邱麟,吴何嘉,刘斯润.静态MRI及DTI对盆底器官脱垂患者肛提肌形态和功能的评估[J].*临床放射学杂志*,2013,32(8):1128-1133.
- [4] 张浩,史铁梅,王鑫璐,陈思吉.经会阴超声评价盆底器官脱垂患者肛提肌收缩功能[J].*中国医学影像技术*,2014,30(3):437-440.
- [5] Hsu Y.,Summers A.,Hussain H.K.,吕涛.动态MRI对盆底器官脱垂与盆底支持组织正常的女性提肌平面角度的比较[J].*世界核心医学期刊文摘*,2006,2(9):31-32.
- [6] 江絮萍,宋岩峰.盆底器官脱垂患者盆底肌 α -肌动蛋白的表达及意义[J].*福建医科大学学报*,2008,42(2):125-127.
- [7] 木其尔,史铁梅,张原溪,刘晨,高敏.超声评估盆底器官脱垂的进展[J].*中国介入影像与治疗学*,2017,14(12):772-775.
- [8] 高闻,李莉,张蕾,欧阳一芹,董晓文,李怀芳.盆底器官脱垂患者肛提肌厚度的MRI研究[J].*同济大学学报(医学版)*,2008,29(6).
- [9] 蔡香然,邱麟,罗新,吴何嘉,刘斯润.MRI评价前中盆底器官脱垂程度及其病因[J].*中国医学影像技术*,2013,29(4):582-586.
- [10] 牛旺,史铁梅,张原溪.剪切波弹性成像技术定量评估盆底器官脱垂患者耻骨直肠肌功能[J].*中国医学影像技术*,2018,34(2):270-274.
- [11] 农美芬,凌冰,王小燕,廖明珠,陈海宁.经会阴三维超声成像对盆底器官脱垂的诊断价值[J].*华西医学*,2014(6):1089-1091.
- [12] 高鑫,王文艳,有慧,刘冬,朱兰,冯逢.动态MRI评价女性盆底器官脱垂的初步研究[J].*磁共振成像*,2010,1(3):204-207.
- [13] 李玉芳,郭端英,魏萍.女性盆底功能障碍疾病患者肛提肌超微结构研究[J].*医药论坛杂志*,2008,29(12):15-17.
- [14] Chen J,Lang JH,Zhu L,Liu ZF,Sun DW,Leng JH,Ren HT,Zhao YH,Guan HZ.压力性尿失禁及盆底组织膨出患者肛提肌形态学的观察[J].*Zhonghua fu chan ke za zhi*,2004,39(8):519-521,i001.
- [15] 李冰,夏志军,赵颖,马起鹏,张玉新.女性盆底器官脱垂对尿动力学的影响[J].*中国实用妇科与产科杂志*,2012(7):520-523.
- [16] 许海楠,夏志军.磁共振成像评估盆底器官脱垂状态的临床意义[J].*中国妇产科临床杂志*,2012,13(2):96-99.
- [17] 谢冰,尚诗瑶,武靖,刘伟,苗娅莉,孙秀丽,杨欣,洪楠,王建六.磁共振成像对盆底器官脱垂患者子宫韧带带形态学评估的初步探讨[J].*中国妇产科临床杂志*,2013,14(3):245-248.
- [18] 谭金凤,余利云,冯丽萍,朱波,姚书忠,谢洪哲,王宁宁.经阴道Prolift全盆底悬吊术治疗盆底器官脱垂11例效果分析[J].*实用医学杂志*,2010,26(20).
- [19] 张鹏,邓燕杰.盆底器官脱垂的研究进展[J].*大连大学学报*,2013(6):46-49.
- [20] 陈瑶,于诗嘉,史铁梅.超声断层显像技术观察盆底器官脱垂患者盆底结构[J].*中国医学影像技术*,2012,28(8):1577-1582.

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