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比较两种动态MRI方法评价盆底功能障碍患者盆底结构改变的价值

Comparison the value of two methods of dynamic MRI of evaluation on pelvic floor structures in patients with pelvic floor dysfunction

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中文摘要:

目的 比较耻尾线(PCL)及HMO分度系统两种测量方法在动态MRI评价女性盆底功能障碍(PFD)患者盆底改变中的价值。方法 对16例女性PFD患者(PFD组)及24名正常女性(无症状组)行静息及最大用力下盆腔MR检查,常规观察盆腔器官及盆底结构。按照PCL系统,在正中矢状位上分别测量膀胱颈、子宫颈、肛直肠连接与PCL的距离;按照HMO分度系统,测量H线(耻骨联合下缘至肛直肠连接后缘的连线)及M线(肛直肠连接后缘到PCL线的最短距离),对盆底松弛进行评价,同时观察膀胱、子宫及直肠位置。对两种测量方法的结果进行对照,并与临床盆腔器官脱垂定量(POP-Q)系统进行对比。结果 无症状组盆腔最大用力时膀胱颈、子宫颈及肛直肠连接下降值分别为(2.63±1.71)mm、(4.31±3.24)mm、(7.32±2.11)mm;H线及M线轻度增长约(2.85±2.62)mm及(7.33±2.14)mm。PFD组中膀胱颈、子宫颈、肛直肠连接分别下降(24.74±10.12)mm、(21.43±14.91)mm及(24.55±13.43)mm;H线及M线分别增加(13.16±10.82)mm及(22.54±11.30)mm。PCL系统诊断9例子宫脱垂、7例膀胱脱垂和6例直肠脱垂,HMO系统分别为4例、7例和5例,两种方法评价膀胱脱垂和直肠脱垂的差异无统计学意义(*P*=0.25、0.06),HMO系统评价子宫脱垂较优(*P*=0.007)。结论 对于正常女性,PCL系统及HMO系统的测量结果一致;对于PFD患者,HMO系统可更全面显示盆底松弛与器官脱垂。

英文摘要:

Objective To compare the value of pubococcygeal line (PCL) system and the H line, M line, organ prolapse (HMO) classification system of dynamic MR imaging for evaluation on pelvic floor structures in patients with pelvic floor dysfunction (PFD). **Methods** Sixteen patients with PFD (PFD group) and 24 normal women (normal female group) underwent static and dynamic pelvic MRI. The pelvic organs and pelvic floor structure were observed conventionally. In PCL system, the distance of bladder neck, uterocervical and anorectal junction to PCL in the mid-sagittal plane of dynamic MRI were measured. In HMO system, the length of H line (the puborectal line, which represents the anteroposterior hiatal dimension line) and M line (the shortest distance between the posterior aspect of the puborectalis muscle sling and the PCL, which is a measure of pelvic floor descent) were measured, and the distances of organ to H line were measured. The results of two measuring methods were compared, and both were compared with clinical POP-Q (Pelvic Organ Prolapse Quantification) system. **Results** In normal female group, bladder neck, uterocervical and anorectal junction mildly decreases during pelvic straining, the down value was (2.63±1.71)mm, (4.31±3.24)mm and (7.32±2.11)mm, respectively. H line and M line slightly increased about (2.85±2.62)mm and (7.33±2.14)mm. In PFD group, the descent of bladder neck, uterocervical and anorectal junction was (24.74±10.12)mm, (21.43±14.91)mm and (24.55±13.43)mm, respectively. M line and H line increased by (13.16±10.82)mm and (22.54±11.30)mm, respectively. PCL system diagnosed 9 cases of uterine prolapse, 7 cases of bladder prolapse and 6 cases of rectal prolapse, while HMO system diagnosed 4, 7 and 5 cases, respectively. There was no statistically significant difference in evaluation of bladder and rectal prolapse between the two methods (*P*=0.25, 0.06), but HMO system was better in evaluation of uterine prolapse (*P*=0.007). **Conclusion** In normal female, the results of PCL system and HMO system are consistent. In patients with PFD, HMO system could be more accurately for thoroughly evaluation of pelvic floor disorders, which having the advantages of revealing all pelvic organs and pelvic floor musculature.

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