

· 综 述 ·

髋关节镜手术适应证的选择与禁忌证[△]

吴毅东, 于康康, 李春宝*, 刘玉杰

(中国人民解放军总医院第四医学中心骨科医学部运动医学科, 北京 100048)

摘要: 髋关节镜手术具有创伤小、术后恢复快、疼痛轻、并发症少等优势。近年来, 随着髋关节镜领域的飞速发展, 其手术技术不断完善改进, 手术适应证不断扩大, 已逐步替代传统开放式手术成为治疗早中期髋部疾病的首选术式, 但部分患者术后疗效不尽如人意。为此, 本文对髋关节镜手术适应证的选择与禁忌证加以概述。

关键词: 髋, 关节镜, 适应证, 禁忌证

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Choice of indications and contraindications for hip arthroscopy // WU Yi-dong, YU Kang-kang, LI Chun-bao, LIU Yu-jie. Department of Sports Medicine, Department of Orthopedics, The Fourth Medical Center, General Hospital of CPLA, Beijing 100048, China

Abstract: Hip arthroscopy has the advantages of less trauma, quick postoperative recovery, light pain and fewer complications. In recent years, hip arthroscopy and its surgical techniques are constantly improved with the rapid development of specific instrumentations, and the indications for clinical application are constantly expanding. It is gradually replacing the traditional open surgery and become the first choice for the treatment of early and middle stage hip injuries and diseases, despite of the fact that clinical outcomes in some patients remain unsatisfactory. In this paper, choice of indications and contraindications for hip arthroscopy were summarized.

Key words: hip, arthroscopy, indication, contraindication

近年来随着骨科运动医学领域的迅速发展, 髋关节镜手术已成为治疗髋关节内部及其外周运动损伤疾病常用的高效创新手术方式。随着对髋关节镜手术和相关疾病的深入研究, 手术适应证仍在不断扩大。但目前研究发现, 髋关节镜手术并非适合每个髋部疾病的患者, 手术适应证的选择和禁忌证的排除与术后疗效密切相关。本文着重介绍髋关节镜手术适应证的选择与禁忌证, 为临床医生在髋部疾病的诊疗过程中提供参考。

1 手术适应证的选择

1.1 髋关节运动损伤性疾病

髋关节撞击综合征 (femoroacetabular impingement syndrome, FAIS) 是青壮年髋关节疼痛的常见病因之一。近期《柳叶刀》杂志发表的一项前瞻性对照研究显示, 髋关节镜手术治疗 FAIS 与最佳保守治疗相比疗效更加显著^[1]; 与开放式手术相比, 髋关节镜

手术在短期和中长期随访中功能改善和预后更佳^[2]。髋关节镜手术对患有 FAIS 的青少年、成人以及 50 岁以上无重度骨性髋关节炎的 FAIS 患者均有效^[3, 4], 还可间接改善耻骨炎与其周围骨髓水肿^[5]。FAIS 合并外侧弹响髋的患者可在髋关节镜术中松解髂胫束, 预后优于未行髂胫束松解的患者^[6]。目前, 术后多数 FAIS 患者未发现骨关节炎的进展。但是, 术中股骨头颈交界区凸轮畸形形成不足是导致接受髋关节镜翻修手术的重要因素。髋关节镜术后联合髋关节腔内注射富血小板血浆、加强肌肉力量康复训练等治疗方案, 可提高术后疗效, 降低术后并发症发生率。

盂唇损伤多由机械性撞击引起, 最常累及盂唇前外缘。髋关节镜下治疗盂唇损伤常采用盂唇修整、修复或重建术。术式选择方面, 盂唇修复固定术的疗效优于盂唇修整术, 采用打结或免打结缝合锚钉进行盂唇撕裂修复疗效相似。根据盂唇损伤的严重程度, 酌情选择修复或重建术, 均能取得良好的疗效^[7]。但

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作者简介:吴毅东,在读研究生,研究方向:运动医学,(电话)15595900652,(电子信箱)wuyidong0597@foxmail.com

*通信作者:李春宝,(电子信箱)cli301@foxmail.com

是,与孟唇修复术相比,270°孟唇重建术难以恢复孟唇的生物力学性能^[8]。

髋关节镜下微骨折术可治疗关节软骨全层缺损,但随着软骨缺损面积越大,术后接受全髋关节置换术的可能性越高^[9]。Hevesi等^[10]发现髋关节镜下行软骨清创磨削术治疗重度髋臼软骨缺损的效果与微骨折术相同,且前者能避免长期负重限制,手术费用低,恢复时间短。关节镜下壳聚糖支架与微骨折联合治疗等方法不断提出,有望进一步提升软骨缺损的手术治疗效果^[11]。

圆韧带(ligamentum teres, LT)损伤不仅导致髋关节疼痛和功能紊乱,还会造成髋关节不稳和关节内软骨损伤,加速FAIS患者骨关节炎进程。LT撕裂首选保守治疗,若保守治疗无效或伴有髋关节内其他疾病,可在髋关节镜下清理LT撕裂部分和周围炎性滑膜,预期效果良好^[12],若髋臼窝有导致LT撕裂的骨赘则必须清除^[13]。LT撕裂清理或切除后若出现髋关节微不稳和持续性疼痛,则可行关节镜下同种异体胫骨后肌腱LT重建术,预后良好^[14]。近期国内有学者报告髋关节镜下诊疗可作为圆韧带囊肿的首选诊疗方法^[15]。

采用关节镜手术治疗髋关节后脱位、股骨头骨折等髋关节创伤的技术正在不断拓展。髋关节孟唇损伤伴骨性Bankart损伤与股骨头中央凹下骨折,采用髋关节镜下复位固定短期随访预后良好^[16, 17]。此类手术注意可能发生腹腔间隔室综合征、肺栓塞和股骨头缺血性坏死等并发症。全髋关节置换假体的关节面若为陶瓷材质,术后可能因创伤致小陶瓷颗粒释放,游离的小陶瓷颗粒嵌顿在活动的关节面间,进而造成无痛性短暂异响,髋关节镜下清理灌洗也许是治疗的有效策略^[18]。

股骨头骨骺滑脱(slipped capital femoral epiphysis, SCFE)是儿童髋关节常见疾病,通常导致股骨头后下方骨骺移位伴随股骨近端变形,偏心距减小。SCFE采用原位固定术后,股骨近端残余畸形可能导致FAIS,轻度SCFE畸形继发FAIS可行髋关节镜下股骨头颈成形术和软骨损伤修复术;对于中重度畸形继发的FAIS,需在髋关节开放手术脱位下行髋关节成形术和改良屈曲-去旋转截骨术^[19]。

1.2 髋关节炎性疾病

髋关节镜手术可应用于系统性炎症性疾病,包括强直性脊柱炎、银屑病关节炎、类风湿关节炎的髋关节病变的治疗。强直性脊柱炎髋关节早期病变,可在全身麻醉下髋关节推拿松解后行髋关节镜下清理术,可

有效缓解疼痛,恢复髋关节活动度,改善生活质量,延缓疾病进展^[20]。系统性炎症性疾病患者若有髋关节骨性结构异常增生,行髋关节镜手术矫正,短期内可缓解疼痛、改善功能,但预后的关键是无髋关节发育不良、无明显软骨退变、联合风湿科进行系统治疗,长期疗效还有待于进一步研究^[21]。

粘连性髋关节囊炎(adhesive capsulitis of the hip, ACH)的临床表现和病理特征与粘连性肩关节囊炎相似。ACH常以髋关节疼痛、活动受限且排除其他诊断作为诊断依据,可用髋关节CT造影或关节镜探查进一步明确诊断。虽治疗方案存在争议,但多数患者保守治疗有效。对于顽固性疼痛、关节活动度严重受限者,可在关节镜下行髋关节囊松解术^[22]。

1.3 髋关节内肿瘤及髋周囊肿

滑膜软骨瘤病(synovial chondromatosis, SC)与色素沉着绒毛结节性滑膜炎(pigmented villonodular synovitis, PVNS)是可能共同来源于滑膜化生的良性肿瘤,在髋关节内的疾病中较为少见。髋关节SC与PVNS的治疗方式相似,可早期行髋关节镜手术尽可能去除异常滑膜、游离体等,以免对关节造成进一步破坏。髋关节SC关节镜手术的预后很大程度上取决于游离体是否完全清除,对术者的手术能力要求较高^[23]。为防止因关节镜手术操作而导致的髋关节内PVNS组织侵及关节外,有学者采用关节囊穿刺术代替关节囊切开术,以减小对关节囊破坏的面积;还可采用射频消融术阻断病变结节的血供,同时需提高关节腔灌注流速,控制术区温度,避免软骨损伤^[24]。

关节内骨样骨瘤(intra-articular osteoid osteoma, IA00)位于髋关节时,因症状与FAIS极为相似,在临床中易误诊或漏诊,但此病多表现为夜间痛,CT扫描可明确诊断。IA00会促进骨关节炎快速进展,需尽早积极诊治。关于手术方式的选择,若髋关节IA00患者有症状且病变部位远离关节软骨,无其他关节内病变,应首选经皮射频消融术;若髋关节内IA00与其他疾病共存,无法判断症状来源于哪种病变,可行经皮射频消融术治疗IA00并保守治疗其余病变;若髋关节IA00患者关节腔内存在其他有症状病变需镜下检查或治疗时,可行髋关节镜下IA00切除术并同时处理其他病变,术后效果良好^[25]。

髋关节周围囊肿压迫股静脉较为少见,可导致单侧下肢静脉回流受阻,造成肢体肿胀。采用髋关节镜手术切除囊肿,解除静脉压迫的同时处理关节内原发

病灶, 效果显著^[26]。

1.4 股骨头坏死

髋关节镜手术可应用于股骨头坏死的治疗, 早期股骨头坏死采用小直径多孔道髓芯减压联合髋关节镜清理术, 效果优于单纯钻孔减压术^[27]。治疗围塌陷期股骨头坏死, 关节镜配合打压植骨腓骨支撑术效果优于单纯打压植骨腓骨支撑术^[28]。

Legg-Calvé-Perthes 病 (儿童股骨头缺血性坏死) 病因尚不明确, 常导致髋关节畸形, 易进展为骨关节炎。髋关节镜下探查术对判断关节内的病理特征和形态改变优于 MRI。在疾病愈合或重塑期行髋关节镜手术治疗可延缓骨关节炎进展, 改善症状与关节活动范围^[29]。

1.5 髋关节先天发育性疾病

髋关节发育不良 (developmental dysplasia of the hip, DDH) 常导致小儿髋关节脱位。对于年龄在 6~18 个月, 且髋关节脱位的 DDH 患儿, 若闭合复位失败可行关节镜下复位术, 与切开复位术相比疗效相当, 而且术中失血量小, 股骨头坏死风险较低^[30]。有学者提出, DDH 可行髋关节镜手术联合髋臼截骨术, 关节镜手术不仅能处理盂唇损伤等关节内病变, 还能为截骨手术建立髋臼中央间室视野, 此法也许能使病情复杂者获得更好的预后, 但确切疗效还需进一步研究^[31]。

交界性髋关节发育不良 (borderline developmental dysplasia of the hip, BDDH) 的诊断和手术方式选择是目前的话题。外侧中心边缘角 (lateral center-edge angle, LCEA) 是诊断 BDDH 的常用参数, 多数学者认为 LCEA 在 20°~25° 之间可诊断 BDDH。但是, 单独依靠 LCEA 进行评估并不可靠, 可使用 Tönnis 角、前中心边缘角、髋臼负重区等其他参数进行综合评估。研究显示, 髋关节镜下盂唇缝合修复、髋臼有限成形和关节囊紧缩缝合术能够获得满意的效果, 但手术成功的关键是严格把握手术适应证^[32]。BMI 和 α 角较小、LCEA 较大、女性、常锻炼且无跛行是 BDDH 患者中髋关节镜手术预后良好的术前预测指标^[33, 34]。

艾-唐综合征 (Ehlers-Danlos syndrome, EDS) 是一种影响体内胶原结构完整性的遗传疾病, 可导致肌肉、韧带、关节囊松弛, 造成关节微不稳。EDS 在髋关节的病变常可见严重的关节囊松弛合并 FAIS。关节镜下髋关节囊折叠术治疗 EDS 可增加髋关节稳定性, 疗效良好^[35]。有学者尝试对 LT 完全撕裂的 EDS 患者行 LT 重建手术, 但目前重建失败率高, 疗

效有待进一步研究^[36]。

1.6 髋关节感染性疾病

与开放式手术相比, 髋关节镜手术治疗急性化脓性髋关节炎恢复快, 创伤小, 外形美观, 且两种术式的术后短期并发症和再次手术发生率相似, 对小儿和成人患者均有良好疗效^[37, 38], 所以髋关节镜手术可作为此病的首选手术方式。小儿活动期髋关节结核在抗结核治疗后行髋关节镜下灌洗清理术安全有效, 有助于在疾病早期改善髋关节功能。

2 禁忌证

髋关节镜手术成功的关键不仅在于手术适应证的选择, 还与禁忌证的排除密切相关。若术前手术禁忌证未被排除, 即使手术操作成功也不能达到预期疗效。因此, 应重视相关手术禁忌证。目前, 髋关节开放性创伤、髋部皮肤溃疡或全身活动性感染是髋关节镜手术的绝对禁忌证。

髋关节重度骨关节炎不建议行髋关节镜手术, 因为术后短期内接受全髋关节置换术的概率极高。髋关节强直、纤维化、关节囊挛缩会导致关节镜下视野狭窄, 手术操作困难, 影响术后效果。FAIS 患者建议在保守治疗无效, 出现症状的早期 (3~6 个月) 行髋关节镜手术, 若在出现症状 2 年后手术, 预后明显较差且翻修率高^[39, 40]。若 FAIS 患者合并有抑郁症, 抑郁严重程度与术后预后不佳呈正相关^[41]。年龄 >45 岁、女性、术前疼痛症状持续 8 个月以上、BMI 高、髋关节骨关节炎、关节间隙 ≤ 2 mm、软骨损伤、LCEA 增大、与盂唇修复术相比行盂唇清理术的 FAIS 患者, 髋关节镜手术效果可能较差^[42]。

髋部疼痛既可来源于髋关节内, 也可来源于脊柱或髋关节周围结构。对于髋部疼痛无法明确诊断的患者, 行超声引导下髋关节腔内封闭注射, 可进一步诊断疼痛来源, 明确手术适应证, 预测手术预后^[43]。医师在术前需与患者达成良好沟通, 使患者对预后合理的期望值, 术后才能达到医患双方满意的治疗效果。

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(同行评议专家: 齐 玮 薛 静)
(本文编辑: 宁 桦)