

·精品手术视频·

机器人辅助腹腔镜下 Lich-Gregoir 输尿管膀胱再植术治疗成人梗阻性巨输尿管症

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摘要: **目的** 探讨机器人辅助腹腔镜下左侧输尿管膀胱再植术的关键步骤及操作要点。**方法** 患者女, 25岁, 10 d前因左腰部间歇性疼痛不适就诊于本院, 超声检查提示左肾、输尿管扩张, 进一步泌尿系增强尿路成像检查示: 左侧输尿管下段近膀胱入口处管腔狭窄、管壁可疑增厚, 上游输尿管及左肾盂、肾盏积水明显扩张。术前积极完善相关辅助检查, 排除手术禁忌后决定实施机器人辅助腹腔镜下左侧输尿管膀胱再植术。关键手术步骤: ①打开乙状结肠悬韧带, 于输尿管跨过髂血管处找到输尿管, 于膀胱子宫陷窝外侧壁打开腹膜, 显露输尿管末端, 以可吸收 Hem-o-lok 夹闭末端输尿管。②于原输尿管上方, 即膀胱后外侧壁斜行切开膀胱肌层, 长 3~4 cm, 向两侧分离肌间沟。将 F4.8 双“J”管向上置入输尿管至肾盂, 在膨出的膀胱黏膜上作一小切口, 口径与末端正常管腔的输尿管相近或略大, 将双“J”管尾端放入膀胱内。③在输尿管无张力、无扭曲的状态下采用 5-0 可吸收线将输尿管与膀胱黏膜间断对称缝合。4-0 可吸收线间断缝合膀胱肌层及少量输尿管外膜, 将 3~4 cm 输尿管末端潜行包埋于膀胱壁肌间沟内, 将膀胱切口处逐层缝合, 观察见输尿管张力可, 吻合口处无漏尿。④确切止血, 引流管经子宫阔韧带隧道置于输尿管末端附近。**结果** 手术顺利完成, 手术时间 1.5 h, 术中出血量 30 ml, 围术期无漏尿、尿瘘形成及感染等并发症发生。术后病理: (左输尿管狭窄段) 输尿管组织, 黏膜轻度慢性炎症, 平滑肌排列稍紊乱。术后 2 周拔除尿管, 3 个月后拔除左侧输尿管支架管, 拔除尿管及支架管后无明显不适症状。**结论** 机器人辅助腹腔镜下行 Lich-Gregoir 手术用于输尿管狭窄的病例安全、可行。术中黏膜下隧道的建立应在黏膜下游离, 层次清楚, 缝合肌层过多、过紧会增加术后输尿管膀胱壁内段狭窄的风险, 过浅游离易造成黏膜裂口。黏膜下隧道不宜过紧, 以免引起输尿管狭窄。

关键词: 输尿管狭窄; 输尿管膀胱再植术; 机器人辅助腹腔镜手术

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Robot-assisted laparoscopic Lich-Gregoir ureterovesical reimplantation for obstructive megaureter in adults

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Abstract: Objective To explore the key steps and operational points of robot-assisted laparoscopic left ureterovesical reimplantation. **Methods** A 25-year-old female patient presented to our hospital with intermittent left-sided abdominal pain for 10 days. Ultrasonography revealed dilatation of the left kidney and ureter, and further contrast-enhanced computed tomography of the urinary system (CTU) showed a narrowed lumen and suspicious thickening of the wall of the lower segment of the left ureter near the bladder entrance, with significant dilation of the upper ureter, left renal pelvis, and calyces. After comprehensive preoperative evaluations, and ruling out any surgical contraindications, robot-assisted laparoscopic left ureteral bladder reimplantation was performed. The key surgical steps were as follows: ①Opening the sigmoid mesocolon and identifying the ureter crossing the iliac vessels, then opening the

peritoneum on the outer wall of the bladder and uterine fossa, and exposing the distal end of the ureter, clamping the distal end of the ureter with an absorbable Hem-o-lok clip. ②Incising the bladder muscle layer obliquely on the outer posterior wall of the bladder, above the original ureter, separating the intermuscular groove bilaterally, placing a F4.8 double “J” tube upwards into the ureter to the renal pelvis, making a small incision in the bulging bladder mucosa with a diameter similar to or slightly larger than the normal lumen of the terminal ureter, and placing the tail end of the double “J” tube into the bladder. ③In a state of tension-free and untwisted ureter, using a 5-0 absorbable suture to symmetrical interrupted suture the ureter and the bladder mucosa, then using 4-0 absorbable suture to intermittently suture the bladder muscle layer and slightly involve the outer membrane of the ureter. The distal 3-4 cm of the ureter was buried in the intermuscular groove of the bladder wall, and the bladder incision was sutured layer by layer. The tension of the ureter was observed, and no urinary leakage was observed at the anastomotic site. ④Hemostasis was achieved, and a drainage tube was placed near the distal end of the ureter through the uterine broad ligament tunnel. **Results** The operation was completed successfully in 1.5 hours, with a blood loss of 30 ml during the operation, and no postoperative complications such as urinary leakage, fistula formation, or infection occurred during the perioperative period. Postoperative pathology showed mild chronic inflammation and slightly disordered smooth muscle arrangement in the mucosa of the narrowed section of the left ureter. The ureteral catheter was removed after 2 weeks, and the left ureteral stent was removed after 3 months, with no significant discomfort symptoms observed. **Conclusions** Robot-assisted laparoscopic Lich-Gregoir surgery is safe and feasible for cases of ureteral stenosis. The creation of the submucosal tunnel during the operation should be performed in the submucosal layer with a clear hierarchy. If the tunnel is too deep and penetrates into the muscle, it may lead to stenosis of the ureteral bladder wall segment after surgery, while if it is too shallow, it may cause mucosal laceration. The submucosal tunnel should not be too tight to avoid ureteral stenosis.

Keywords: Ureteral stenosis; Ureteral bladder reimplantation; Robot-assisted laparoscopic surgery