

经尿道输尿管镜钬激光碎石治疗妊娠合并 输尿管结石 17 例报告

邵胜¹ 梁朝朝¹ 施浩强¹ 张翼飞¹ 郝宗耀¹
周骏¹ 樊松¹ 江长琴¹ 陈先国¹ 孔瑞¹

【摘要】 目的:探讨经尿道输尿管镜钬激光碎石治疗妊娠合并输尿管结石的安全性及疗效。**方法:**回顾性分析 2010 年 1 月~2012 年 6 月处理的妊娠合并输尿管结石患者 17 例,其中早孕、中孕、晚孕分别为 9 例、5 例、3 例,平均妊娠期为 22 周。单侧输尿管结石 14 例,输尿管结石合并肾结石 2 例,双侧输尿管结石 1 例。17 例患者经过积极保守治疗后效果不佳,在连续硬膜外麻醉下行输尿管镜钬激光碎石术,均留置输尿管支架管。**结果:**17 例患者经手术治疗,症状明显缓解,无妇产科及泌尿科相关的手术并发症,均顺利度过妊娠期及围生期,分娩出正常胎儿。待分娩结束后拔出留置的输尿管支架管。**结论:**妊娠合并输尿管结石患者应接受积极主动的处理,经尿道输尿管镜钬激光碎石术是其安全有效的治疗措施之一。

【关键词】 输尿管结石;输尿管镜;钬激光;妊娠期

【中图分类号】 R693 **【文献标识码】** A **【文章编号】** 1001-1420(2013)03-0174-03

Treatment of pregnancy with ureteral stone via transurethral ureteroscopy holmium laser lithroscopy

TAI Sheng LIANG Chaozhao SHI Haoqiang ZHANG Yifei HAO Zongyao

ZHOU Jun FAN Song JIANG Changqin CHENG Xianguo KONG Rui

(Department of Urology, the First Affiliated Hospital of Anhui Medical University, Hefei, 230022, China)

Corresponding author: LIANG Chaozhao, E-mail: Liang_chaozhao@163.com

Abstract Objective: To explore the effect and safety of transurethral ureteroscopy holmium laser lithroscopy among pregnancy with ureteral stone. **Methods:** The retrospective study is performed that is analysis of 17 pregnancy with ureteral stone from January 2010 to June 2012. The first, second and third trimester is 9, 5 and 3 cases, respectively (mean, 22 weeks). The unilateral ureteral stone, ureteral and renal stone, bilateral ureteral stone is 14, 2, 1, respectively. The transurethral ureteroscopy holmium laser lithroscopy and catheterization of ureteral stent is performed after conservative treatment with poor effect. **Results:** The symptoms are alleviation, and there is not any obstetric and urologic complication after surgery. All the patients deliver the healthy neonates and ureteral stents are removed after deliverance. **Conclusions:** Urologists should take effective and positive treatment for pregnancy with ureteral stone, and transurethral ureteroscopy holmium laser lithroscopy is one of the safe and effective management.

Key words ureteral stone; transurethral ureteroscopy; holmium laser lithroscopy; pregnancy

妊娠合并泌尿系结石在临床上较为常见,其发生率为 2%~6%^[1]。妊娠合并输尿管结石常常因急诊就诊于泌尿科门诊,如果处理不当,常常会引起胎膜早破、早产、流产、死胎等严重后果;如果处理不及时,孕妇也会造成重症感染等严重后果^[1,2]。在诊疗过程中,应积极选择合理有效的治疗方法予以处理,确保胎儿及孕妇的安全。本文回顾性分析了本院 2010 年 1 月~2012 年 6 月处理的妊娠合并输尿管结石患者 17 例的临床资料,现报告如下。

1 资料与方法

1.1 临床资料

本组 17 例,平均年龄 28(22~36)岁。早孕、中孕、晚孕分别为 9 例、5 例、3 例,平均妊娠期为 22 周。17 例妊娠合并输尿管结石患者均伴有急性肾绞痛表现:恶心、呕吐,其中伴有发热 4 例,肉眼血尿 3 例。所有患者因为妊娠均未接受 KUB 及磁共振检查,但均接受了泌尿系 B 超检查以明确输尿管结石的诊断,其中单侧输尿管结石 14 例,输尿管结石合并肾结石 2 例,双侧输尿管结石 1 例。合并肾积水患者 10 例,其中集合系统分离均为 1.5 cm(1~4 cm)。入院后,患者同其他结石患者一样常规接受了清洁中段尿培养及药敏试验检查,其中培养阳性 5 例,阴性 12 例。尿常规检查 10 例,均有不同程度泌尿系感染;血常规检查 7 例,血常规升

¹安徽医科大学第一附属医院泌尿外科(合肥,230022)
通信作者:梁朝朝, E-mail: Liang_chaozhao@163.com

高;5例患者尿常规、血常规均提示有感染。

1.2 治疗方法

入院后除积极完善相关检查外,均行山莨菪碱及黄体酮20 mg/d肌注,作解痉治疗,同时行补液;对于合并有感染者,行头孢曲松钠抗感染治疗,并嘱其多饮水。17例患者经过保守治疗后效果不佳,肾绞痛、恶心、呕吐等相关症状呈进行性加重。在同患者及家属充分沟通后决定行急诊输尿管镜下钬激光碎石术。考虑到麻醉对孕妇及胎儿的影响,17例患者均接受了连续硬膜外麻醉,待麻醉满意后,患者均取截石位,常规消毒铺巾。经尿道置入STROZ输尿管硬镜,在F₃输尿管导管引导下置入输尿管镜,发现输尿管下段结石10例,输尿管中段结石4例,输尿管上段结石3例(其中双侧输尿管结石患者双侧结石均位于双输尿管下段)。5例患者结石嵌顿于输尿管壁处,周围有息肉包裹,结石周围输尿管黏膜均呈炎症反应。患者采用头高脚低位,在低灌注压下输尿管镜直视下置入钬激光光纤,当到达结石部位后插入钬激光光纤击碎结石(钬激光能量为2.5 J,频率为12 Hz);后在斑马导丝引导下置入F_{4.7}输尿管支架管。为防止石街形成,所有患者的输尿管支架管均待妊娠结束后拔出。

2 结果

所有接受手术治疗的17例妊娠合并输尿管结石患者手术均顺利,均未出现泌尿腔镜手术的相关并发症,术后安返。术后予以黄体酮解痉治疗、补液等处理,术后第1天拔除导尿管,待观察1天,17例患者肾绞痛症状均明显缓解,术后第2天出院。术后密切随访,17例患者均顺利度过妊娠期和围生期,分娩出正常胎儿。待分娩结束后,所有患者留置的输尿管支架管均予以拔出。

3 讨论

平均每1500个妊娠的孕妇中就有1例并发输尿管结石,绝大多数患者均因为肾绞痛症状而就诊于泌尿外科^[3]。80%~90%妊娠合并输尿管结石患者多发生于中期妊娠及晚期妊娠,绝大多数患者均没有泌尿系结石的既往病史,肋腰部疼痛多为首发症状(85%~100%)并伴有镜下血尿(75%~85%)^[4~6]。患者可以合并泌尿系感染(30%~55%)、下尿路症状、子痫前期等相关表现^[3,7,8]。在组中,100%患者均表现出恶心、呕吐等典型的肾绞痛表现,约58%患者就诊时有不同程度的感染,基本上同以往报道相一致。

妊娠时女性雌激素和孕激素水平生理代谢的不同、已经妊娠时女性解剖和生理结构的异常,也是导致妊娠合并输尿管结石的主要原因。妊娠时孕激素水平的升高导致输尿管管壁增厚、管壁蠕动减弱,加重输尿管结石在输尿管内滞留的可能性;

同时雌激素水平的降低导致了体积血钙的升高,从而诱发泌尿系结石的形成;同时妊娠时子宫增大及右旋压迫输尿管也是诱发妊娠合并输尿管结石的一个重要因素之一^[9]。Meria等对244例妊娠合并输尿管结石的孕妇进行了结石成分相关分析,结果表明磷酸钙为妊娠合并输尿管结石主要组成成分,并提示与妊娠时孕激素水平升高密切相关^[5]。

妊娠合并输尿管结石病人常常出现典型的肾绞痛表现,表现为恶性、呕吐、发热、血尿等。本组中17例妊娠合并输尿管结石患者均伴有恶心、呕吐等急性肾绞痛表现,其中伴有发热4例,肉眼血尿3例。急诊收住入院的患者疼痛症状均较明显,疼痛及炎症的刺激会反射性诱发子宫收缩,可能会造成一定程度的早产、流产、死胎;同时如泌尿系感染不能及时控制而诱发重症感染,亦会产生严重影响^[4]。妊娠合并输尿管结石的诊断首选泌尿系B超,但泌尿系B超对输尿管结石的定位诊断不及KUB平片敏感。本组17例患者均通过泌尿系B超明确诊断,同时根据泌尿系B超的定位指导输尿管镜下钬激光碎石。Wang等提出了要根据患者及胎儿对影像学检查的利与弊全面综合考虑,选择合适的检查手段(B超、KUB、MRI)^[10]。

妊娠合并输尿管结石的首选治疗方法还是以保守治疗为主,而采用输尿管镜钬激光碎石处理一直以来有着很大争议^[11,12]。James等^[13]曾对8例有症状的妊娠合并输尿管结石患者采用了输尿管镜下钬激光碎石术及术后输尿管留置支架管置入术,结果其手术成功率为91%,结石清除率为89%,手术过程中均未出现妇产科及泌尿外科手术相关并发症。在本组中,17例患者采用连续硬膜外麻醉的方法,在输尿管镜下行输尿管镜钬激光碎石术。手术过程中,输尿管镜的置入均很顺利,同时术后常规留置输尿管支架管,其手术成功率及结石的清除率均为100%。这可能与泌尿外科医生开展输尿管镜手术技术操作娴熟及新型输尿管支架管留置时间延长有一定的关系。因此,对于妊娠合并输尿管结石的处理,泌尿外科医生应持积极的态度。

妊娠合并输尿管结石的处理比较棘手,对于准备妊娠的妇女,在产前检查时最好行泌尿系相关检查,以排除泌尿系结石的可能。总之,对于妊娠合并输尿管结石患者的诊治应该综合全面分析、评估,必要时给予积极相关处理,确保母子平安。

【参考文献】

- 1 Thomas A A, Thomas A Z, Campbell S C, et al. Urologic emergencies in pregnancy[J]. Urology, 2010, 76 (2):453-460.
- 2 Liu G, Wang J, Li J, et al. Urolithiasis in pregnancy; survey in clinical epidemiology[J]. J Huazhong Univ

- Sci Technolog Med Sci, 2011, 31(2):226—230.
- 3 Isen K, Hatipoglu N K, Dedeoglu S, et al. Experience with the diagnosis and management of symptomatic ureteric stones during pregnancy[J]. Urology, 2011, 79(3):508—512.
 - 4 Negru I, Pricop C, Costachescu G. Renal colic in pregnancy[J]. Rev Med Chir Soc Med Nat Iasi, 2011, 114(2):439—444.
 - 5 Meria P, Hadjadj H, Jungers P, et al. Stone formation and pregnancy: pathophysiological insights gained from morphoconstitutional stone analysis[J]. J Urol, 2010, 183(4):1412—1416.
 - 6 Polat F, Yesil S, Kirac M, et al. Treatment outcomes of semirigid ureterorenoscopy and intracorporeal lithotripsy in pregnant women with obstructive ureteral calculi[J]. Urol Res, 2011, 39(6):487—490.
 - 7 Nielsen RV, Ostergaard J, Alling-Moller L. Urological problems in pregnancy, birth, and puerperium — a systematic review[J]. Ugeskr Laeger, 2012, 174(18):1225—1229.
 - 8 Cocuzza M, Colombo J R Jr, Lopes R I, et al. Use of inverted fluoroscope's C-arm during endoscopic treatment of urinary tract obstruction in pregnancy: a practicable solution to cut radiation[J]. Urology, 2011, 75(6):1505—1508.
 - 9 陈文忠, 桂志明, 何锦园, 等. 妊娠期尿路结石的治疗[J]. 临床泌尿外科杂志, 2011, 26(11):849—851.
 - 10 Wang P I, Chong S T, Kielar A Z, et al. Imaging of pregnant and lactating patients: part 2, evidence-based review and recommendations[J]. AJR Am J Roentgenol, 2011, 198(4):785—792.
 - 11 Burgess K L, Gettman M T, Rangel L J, et al. Diagnosis of urolithiasis and rate of spontaneous passage during pregnancy[J]. J Urol, 2011, 186(6):2280—2284.
 - 12 Klasen J, Rabenalt R, Heinen W, et al. Fornix rupture caused by a ureteral stone during pregnancy: non-contrast-enhanced MR urography [J]. Urologe A, 2010, 49(9):1172—1175.
 - 13 Watterson J D, Girvan A R, Beiko D T, et al. Ureterscopy and holmium:YAG laser lithotripsy: an emerging definitive management strategy for symptomatic ureteral calculi in pregnancy[J]. Urology, 2002, 60(3):383—387.

(收稿日期:2012-07-18)

(上接第 173 页)

石清除率更高,治疗效果更明确。

[参考文献]

- 1 Basiri A, Simforoosh N, Ziaee A, et al. Retrograde, antegrade, and laparoscopic approaches for the management of large, proximal ureteral stones: a randomized clinical trial[J]. J Endourol, 2008, 22(12):2677—2680.
- 2 Ni Yu W, Cheng F, Zhang X, et al. Retrograde ureteroscopic treatment for upper ureteral stones: a 5-year retrospective study[J]. J Endourol, 2010, 24(11):1753—1757.
- 3 koobakht M R, Emamzadeh A, Abedi A R, et al. Transureteral lithotripsy versus extracorporeal shock wave lithotripsy in management of upper ureteral calculi: a comparative study[J]. J Urol, 2007, 177(4):207—211.
- 4 孙颖浩, 戚晓升, 王林辉, 等. 输尿管软镜下钬激光碎石术治疗肾结石(附 51 例报告)[J]. 中华泌尿外科杂志, 2002, 23(11):681—682.
- 5 胡俊杰, 廖国强, 卞崔冬, 等. 输尿管镜下双频激光碎石术治疗输尿管结石 268 例报告[J]. 中国微创外科杂志, 2007, 7(10):946—947.
- 6 Dasgupta P, Cynk M S, Bultitude M F, et al. Flexible ureterorenoscopy: prospective analysis of the Guy's experience[J]. Ann R Coll Surg Engl, 2004, 86(5):367—370.
- 7 Zhong W, Zeng G, Wu K, et al. Does a smaller tract in percutaneous nephrolithotomy contribute to high renal pelvic pressure and postoperative fever[J]? Journal of Endourology, 2008, 22(9):2147—2151.
- 8 Rehman J, Monga M, Landman J, et al. Characterization of intrapelvic pressure during ureteropyeloscopy with ureteral access sheaths. Characterization of intrapelvic pressure during ureteropyeloscopy with ureteral access sheaths[J]. Urology, 2003, 61(4):713—718.

(收稿日期:2012-12-09)