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三种不同手术方式治疗精索静脉曲张患者的临床研究*

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摘要 目的:研究三种不同的手术方式治疗精索静脉曲张患者(VC)的临床疗效。**方法:**选择 2015 年 1 月至 2017 年 6 月在我院接受 VC 手术的患者 128 例进行研究,其中接受腹膜后高位结扎术者 45 例,纳入腹膜后组;接受腹腔镜手术者 39 例,纳入腹腔镜组;接受显微手术者 44 例,纳入显微手术组,对比各组患者的手术时间、出血量、住院时间及住院总费用,对比术前、术后 3 个月各组的睾丸体积、性激素水平,随访 1 年,记录各组复发率和并发症发生情况。**结果:**显微手术组的手术时间长于腹膜后组与腹腔镜组,出血量、住院时间、住院总费用少于腹膜后组与腹腔镜组($P<0.05$)。术前、术后 3 个月各组左侧、右侧睾丸体积对比差异均无统计学意义($P>0.05$)。术后 3 个月各组睾酮(T)水平高于术前,卵泡刺激素(FSH)、黄体生成素(LH)水平低于术前($P<0.05$),术后 3 个月显微手术组 T 水平高于腹膜后组与腹腔镜组,FSH、LH 水平低于腹膜后组与腹腔镜组($P<0.05$)。与腹膜后组、腹腔镜组相比,显微手术组的复发率及并发症发生率更低($P<0.05$)。**结论:**不同手术方案治疗 VC 均可获得一定的疗效,但显微术式可明显改善性激素水平,降低复发率及并发症发生率,术后恢复好,费用少。

关键词:腹膜后高位结扎术;腹腔镜手术;显微手术;精索静脉曲张;疗效

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Clinical Study of Three Different Surgical Methods for Varicocele*

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ABSTRACT Objective: To study the clinical effect of three different surgical methods in the treatment of patients with varicocele (VC). **Methods:** 128 cases of patients underwent VC surgery in our hospital from January 2015 to June 2017 as the research objects. Among which there were 45 patients underwent retroperitoneal high ligation, named as retroperitoneal group; 39 patients underwent laparoscopic surgery, named as laparoscopic group; 44 patients underwent microsurgery, named as microsurgery group. The operation time, bleeding volume, hospitalization time and total hospitalization expenses of each group were compared. The testicular volume and sex hormone levels of each group before surgery and 3 months after surgery were compared. The recurrence rate and complications of each group were recorded after one year follow-up. **Results:** The operation time of the microsurgery group was longer than that of the retroperitoneal group and the laparoscopic group, and the amount of bleeding, hospitalization time and total hospitalization cost of the microsurgery group were less than those of the retroperitoneal group and the laparoscopic group ($P<0.05$). There was no significant difference in the volume of left and right testicles between the two groups before and 3 months after surgery ($P>0.05$). 3 months after surgery, the level of testosterone (T) in each group was higher than that before surgery, and the levels of follicle stimulating hormone (FSH) and luteinizing hormone (LH) in each group were lower than those before surgery ($P<0.05$). 3 months after surgery, the levels of T in microsurgery group were higher than those in retroperitoneal group and laparoscopic group, and the levels of FSH and LH were lower than those in retroperitoneal group and laparoscopic group ($P<0.05$). Compared with retroperitoneal group and laparoscopic group, the recurrence rate and complication rate of microsurgery group were lower ($P<0.05$). **Conclusion:** Different surgical procedures can achieve certain curative effect in the treatment of VC, but microsurgery can significantly improve the level of sex hormones, reduce the recurrence rate and the incidence of complications, recover well and cost less.

Key words: Retroperitoneal high ligation; Laparoscopic surgery; Microsurgery; Varicocele; Curative effect

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前言

精索静脉曲张(Varicocele, VC)在临床比较常见,据统计,VC 在男性人群中有着 10%~15%的发病率,且其又青壮年男

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性的左侧较为多发,临床上大约有 25% 的精液异常男性患有 VC,因此其是引发男性不育的一种常见疾病^[1-3]。通过手术治疗 VC 的主要方法包括腹膜后高位结扎术式和腹腔镜术式、显微术式。三种术式均可获得一定的疗效,但近年来国外报道指出^[4-6],腹膜后高位结扎术与腹腔镜术式具有较高的复发率及并发症发生率,鉴于此,本文通过对比三种术式治疗 VC 患者的临床情况,比较不同方法间的应用特点,对主要研究内容进行阐述。

1 资料和方法

1.1 基础资料

选择 2015 年 1 月至 2017 年 6 月在我院接受 VC 手术的患者 128 例进行研究。所有患者均为男性,年龄 18~38 岁,平均(29.8±2.4)岁。入选标准:(1)符合 WHO 关于 VC 的诊断标准^[7],并经影像学检查证实;(2)保守治疗效果不佳者;(3)具有手术适应症者。排除标准:(1)有生殖系统恶性肿瘤者;(2)同侧腹膜后亦是盆腔区域性手术史者。其中接受腹膜后高位结扎术者 45 例,纳入腹膜后组,年龄 18~36 岁,平均(28.42±2.79)岁;静脉曲张的分级程度:Ⅱ度 36 例,Ⅲ度 9 例,发生部位:左侧 20 例、右侧 15 例、双侧 10 例,合并症:高血压 5 例、高血脂 6 例、糖尿病 4 例。接受腹腔镜手术者 39 例,纳入腹腔镜组,年龄 20~37 岁,平均(28.63±2.31)岁;静脉曲张Ⅱ度 35 例,Ⅲ度 4 例,发生部位:左侧 19 例、右侧 11 例、双侧 9 例,合并症:高血压 4 例、高血脂 4 例、糖尿病 3 例。接受显微手术者 44 例,纳入显微手术组,年龄 19~38 岁,平均(28.95±2.62)岁;静脉曲张Ⅱ度 36 例,Ⅲ度 8 例,发生部位:左侧 22 例、右侧 14 例、双侧 8 例,合并症:高血压 5 例、高血脂 4 例、糖尿病 5 例。三组年龄、静脉曲张分级程度、发生部位、合并症对比,无统计学差异($P>0.05$)。

1.2 研究方法

1.2.1 腹膜后组 体位取仰卧位,给予硬膜外麻醉,取髂前上棘至趾骨结节连线中点处作为起点,取腹股沟内环上方大约 5 cm 处作为止点行一斜向外的切口,长度为 3~5 cm。而后将腹外斜肌腱膜予以切开,朝内侧将腹膜推开,显露患者的精索静脉,并游离患者的精索内静脉 2 cm,1~2 支,然后在其近端

进行双重结扎,挤压阴囊以促进血排空,双重结扎其精索静脉的远端,并切除中间精索静脉。

1.2.2 腹腔镜组 全麻后,于脐下缘作一弧形切口,行气管插管,气腹压力范围为 10~12 mmHg 后移除气腹针,放入 10 mm 穿刺套管(Trocar)和观察镜,直视下在脐下 5 cm 位置的腹直肌外缘依次穿刺 5 mm 的 Trocar,将操作器械予以置入,在内环上方寻找精索内静脉,以 T 型手法沿精索血管将腹膜切开,游离精索动静脉后给予剪断。

1.2.3 显微手术组 麻醉方式同腹膜后组,麻醉起效后在患者的腹股沟的外环进行横切口,长度 2~3 cm,暴露精索,将睾丸提至切口外,结扎后回纳睾丸。通过显微镜观察结扎精索外静脉,逐层切开提睾肌、精索内外筋膜,分离精索内静脉后进行双重结扎,切除中间段。

1.3 观察指标

记录各组患者的手术时间、出血量、住院时间及住院总费用;比较术前、术后 3 个月各组患者的睾丸体积;于术前、术后 3 个月采集患者清晨空腹肘静脉血 4 mL,经 2900 r/min 离心 12 min,离心半径 10 cm,分离血清,检测各组血清睾酮(Testosterone, T)、卵泡刺激素(Follicle stimulating hormone, FSH)、黄体生成素(Luteinizing hormone, LH)水平;采用门诊复查或电话询问的方式随访 1 年,比较各组的复发率和并发症发生率。

1.4 数据处理

以 SPSS21.0 分析处理本研究数据,计量资料实施 t 检验,多组间比较采用 F 检验,以($\bar{x} \pm s$)表示,计数资料比较采用 χ^2 检验,以率表示,检验水准 $\alpha=0.05$ 。

2 结果

2.1 围术期相关指标对比

与腹膜后组、腹腔镜组相比,显微手术组的手术时间较长,出血量、住院时间、住院总费用少于腹膜后组与腹腔镜组($P<0.05$),腹膜后组与腹腔镜组手术时间、出血量、住院时间比较无差异($P>0.05$),但腹腔镜组住院总费用少于腹膜后组($P<0.05$)。见下表 1。

表 1 各组患者围术期相关指标对比($\bar{x} \pm s$)

Table 1 Comparison of perioperative related indicators in each groups ($\bar{x} \pm s$)

Groups	n	Surgery time (min)	Amount of bleeding (mL)	Total hospitalization expenses (RMB)	Hospitalization time (d)
Retroperitoneal group	45	57.23±12.42	17.28±3.47	8893.27±891.23	5.26±2.24
Laparoscopic group	39	55.28±13.61	18.23±5.21	7739.28±672.78*	4.52±1.53
Microsurgery group	44	65.84±15.36 [△]	12.87±6.92 [△]	6792.34±491.57 [△]	3.27±1.32 [△]
F		6.214	5.200	9.620	4.205
P		0.000	0.000	0.000	0.002

Note: compared with retroperitoneal group, * $P<0.05$; compared with laparoscopic group, [△] $P<0.05$.

2.2 各组手术前后的睾丸体积对比

术前各组左侧、右侧睾丸体积对比,差异均无统计学意义($P>0.05$),术后 3 个月,各组左侧、右侧睾丸体积较术前有所增大,但差异无统计学意义($P>0.05$)。见下表 2。

2.3 各组手术前后性激素水平对比

术前各组 T、FSH、LH 水平比较无差异($P>0.05$),术后 3 个月各组 T 水平高于术前,FSH、LH 水平低于术前($P<0.05$),术后 3 个月显微手术组 T 水平高于腹膜后组与腹腔镜组,FSH、LH 水平低于腹膜后组与腹腔镜组($P<0.05$)。见下表 3。

表 2 各组手术前后的睾丸体积对比 (cm^3 , $\bar{x} \pm s$)Table 2 Comparison of testicular volume in each groups before and after surgery (cm^3 , $\bar{x} \pm s$)

Groups	n	Before surgery		3 months after surgery	
		Left side	Right side	Left side	Right side
Retroperitoneal group	45	8.99 $\pm$ 3.24	9.78 $\pm$ 3.87	10.31 $\pm$ 3.13	11.75 $\pm$ 2.07
Laparoscopic group	39	9.33 $\pm$ 1.26	9.98 $\pm$ 3.54	10.04 $\pm$ 2.77	11.09 $\pm$ 1.53
Microsurgery group	44	9.47 $\pm$ 3.02	9.99 $\pm$ 3.48	10.57 $\pm$ 2.35	11.18 $\pm$ 3.07
F	-	2.278	2.136	1.948	1.723
P	-	0.154	0.273	0.338	0.426

表 3 各组手术前后性激素水平对比 ($\bar{x} \pm s$)Table 3 Comparison of sex hormone levels in each group before and after surgery ($\bar{x} \pm s$)

Groups	n	T(ng/mL)		FSH(IU/L)		LH(IU/L)	
		Before surgery	3 months after surgery	Before surgery	3 months after surgery	Before surgery	3 months after surgery
Retroperitoneal group	45	1.89 $\pm$ 0.48	2.12 $\pm$ 0.45 [#]	2.34 $\pm$ 0.31	1.85 $\pm$ 0.42 [#]	3.58 $\pm$ 0.69	2.89 $\pm$ 0.52 [#]
Laparoscopic group	39	1.80 $\pm$ 0.42	2.23 $\pm$ 0.49 [#]	2.33 $\pm$ 0.34	1.79 $\pm$ 0.36 [#]	3.54 $\pm$ 0.66	2.78 $\pm$ 0.42 [#]
Microsurgery group	44	1.84 $\pm$ 0.41	2.49 $\pm$ 0.52 ^{#*} ^Δ	2.38 $\pm$ 0.32	1.63 $\pm$ 0.29 ^{#*} ^Δ	3.57 $\pm$ 0.67	2.39 $\pm$ 0.39 ^{#*} ^Δ
F	-	0.689	5.792	0.872	4.971	0.431	6.924
P	-	0.510	0.000	0.341	0.000	0.598	0.000

Note: comparison with preoperative, [#] $P < 0.05$; compared with retroperitoneal group, ^{*} $P < 0.05$; compared with laparoscopic group, ^Δ $P < 0.05$.

2.4 各组患者的预后对比

随访 1 年, 128 例患者失访 5 例, 其中腹膜后组 2 例, 腹腔镜组 1 例, 显微手术组 2 例。主要并发症为阴囊水肿和睾丸鞘

膜积液。显微手术组的复发率及并发症发生率低于腹膜后组与腹腔镜组 ($P < 0.05$), 而腹膜后组与腹腔镜组预后情况比较无差异 ($P > 0.05$)。见下表 4。

表 4 各组患者复发率和并发症发生率对比 [$n(\%)$]Table 4 Comparison of recurrence rate and complication rate in each group [$n(\%)$]

Groups	n	Recurrence rate	Incidence of complications
Retroperitoneal group	43	7 (16.28)	9 (20.93)
Laparoscopic group	38	5 (13.16)	6 (15.79)
Microsurgery group	42	0 (0) [*] ^Δ	1 (2.38) [*] ^Δ

Note: compared with retroperitoneal group, ^{*} $P < 0.05$; compared with laparoscopic group, ^Δ $P < 0.05$.

3 讨论

VC 通常是指由静脉血液返流而导致的精索静脉中蔓状静脉丛的曲张及淤血症状, 是一种常见疾病^[8-10]。VC 常见表现为阴囊坠痛不适, 且能够致使患者睾丸体积减小、睾丸发育迟缓等, 严重者甚至会引发男性不育^[11,12]。手术疗法是治疗 VC 的常用方法, 术后患者部分睾丸具有的生精功能得到恢复, 能够有效避免进一步的睾丸损伤, 利于间质细胞不断分泌雄激素^[13-15]。国外有报道指出, 不同术式治疗 VC 的疗效存在争议, 但腹膜后传统术式以及腹腔镜术式均可能无法有效地分离患者睾丸动脉及精索淋巴管, 常需同时将其结扎^[16,17]。而显微手术则可最大限度地患者的睾丸动脉以及淋巴管进行保留, 为进一步深入分析各类术式的治疗效果与患者的预后情况, 本文通过对比分析三种不同术式治疗 VC 的疗效, 目的在于选择最佳术式为 VC 患者实施治疗。

本研究显微手术组的手术时间长于腹膜后组与腹腔镜组,

出血量、住院时间、住院总费用少于腹膜后组与腹腔镜组, 这表明显微手术组虽然所需的手术时间相对较长, 但术后患者恢复更快, 费用更低, 原因可能是因为显微手术需要术者精细操作, 若术者操作欠熟练, 亦或是术中难以显露睾丸动脉时, 常需较多时间实施解剖分离, 因此增加了手术整体时间^[18-20]。而显微手术组患者恢复更快则可能是因为此类手术无需切开患者的腹外斜肌腱膜, 造成的疼痛及损伤相对较轻, 因此患者更易恢复^[21,22]。本研究结果发现, 术前各组左侧、右侧睾丸体积对比差异均无统计学意义, 虽然术后 3 个月各组左侧、右侧睾丸体积较术前有所增大, 但差异亦无统计学意义, 这表明不同手术方案治疗 VC 患者后对其睾丸体积并无明显影响, 这也说明了三种手术方案之所以在临床均已应用地较为普遍的原因之一可能是不会损害患者的睾丸体积^[23,24]。此外, 术后 3 个月各组 T 水平高于术前, FSH、LH 水平低于术前, 且显微手术组 T 水平高于腹膜后组与腹腔镜组, FSH、LH 水平低于腹膜后组与腹腔镜组, 说明 VC 患者手术后可改善性激素水平, 显微手术组效果

更明显。本研究结果还显示,与腹膜后组、腹腔镜组相比,显微手术组的术后复发率及并发症的发生率更低,可能是因为术中借助显微镜能够清晰地观察睾丸,便于术者直接操作并辨别睾丸回流静脉^[25-27]。而腹膜后组与腹腔镜组手术过程中未能直接观察睾丸,则可能由于阴囊侧枝静脉存在导致 VC 患者的术后复发^[28]。同时,显微术式造成的淋巴管误扎明显减少,手术后产生的鞘膜积液亦随之减少,因此复发率及并发症发生率均较低^[29,30]。

综上所述,不同手术方案治疗 VC 均可获得一定的疗效,但显微术式的复发率以及并发症的发生率均较低,术后恢复较快,可明显改善性激素水平。

参考文献(References)

- [1] Pagani RL, Ohlander SJ, Niederberger CS. Microsurgical varicocele ligation: surgical methodology and associated outcomes [J]. *Fertil Steril*, 2019, 111(3): 415-419
- [2] Reesink DJ, Huisman PM, Wiltink J, et al. Sneeze and pop: a ruptured varicocele; analysis of literature, guided by a well-documented case-report[J]. *BMC Urol*, 2019, 19(1): 14
- [3] 罗永科, 李培英, 邵春晖, 等. 彩色多普勒超声检测睾丸微石症合并精索静脉曲张患者睾丸动脉与精索静脉血流动力学的临床分析[J]. *现代生物医学进展*, 2017, 17(15): 2969-2971, 2986
- [4] Madani AH, Mokhtari G, Jandaghi AB, et al. Right varicocele secondary to left-sided inferior vena cava with a retro-aortic left renal vein and azygos continuation[J]. *Turk J Urol*, 2018, 45(1): 73-75
- [5] Ravikanth R. Varicocele with Concomitant Ipsilateral Intratesticular Spermatocele: A Rarity[J]. *J Med Ultrasound*, 2018, 26(4): 224-225
- [6] Tsili AC, Sofikitis N, Xiropotamou O, et al. Diffusion tensor imaging as an adjunct tool for the diagnosis of varicocele [J]. *Andrologia*, 2019, 51(3): e13210
- [7] 过新民, 李正明, 宋粤生, 等. 亚临床型精索静脉曲张的超声诊断及精液质量分析[J]. *中国基层医药*, 2010, 17(12): 1585-1587
- [8] Mongioi LM, Mammìno L, Compagnone M, et al. Effects of Varicocele Treatment on Sperm Conventional Parameters: Surgical Varicoelectomy Versus Sclerotherapy[J]. *Cardiovasc Intervent Radiol*, 2019, 42(3): 396-404
- [9] Ghandehari-Alavijeh R, Tavalaei M, Zohrabi D, et al. Hypoxia pathway has more impact than inflammation pathway on etiology of infertile men with varicocele[J]. *Andrologia*, 2019, 51(2): e13189
- [10] Bernie HL, Goldstein M. Varicocele Repair Versus Testosterone Therapy for Older Hypogonadal Men with Clinical Varicocele and Low Testosterone[J]. *Eur Urol Focus*, 2018, 4(3): 314-316
- [11] Rehman KU, Zaneb H, Qureshi AB, et al. Pattern of varicocele vein blood gases in patients undergoing microsurgical Varicoelectomy[J]. *BMC Urol*, 2018, 18(1): 104
- [12] Afsin M, Otludil B, Dede O, et al. An examination on composition of spermatozoa obtained from pre-operative and post-operative varicocele patients[J]. *Reprod Biol*, 2018, 18(4): 361-367
- [13] 杨立杰, 刘庆军. 不同精索静脉曲张手术治疗精索静脉曲张的疗效对比[J]. *临床和实验医学杂志*, 2016, 15(10): 1016-1020
- [14] Pan J, Zhu Z, Xu G, et al. Expression of claudin-11 in a rat model of varicocele and its effects on the blood-testis barrier[J]. *Mol Med Rep*, 2018, 18(6): 5647-5651
- [15] Emad-Eldin S, Salim AMA, Wahba MH, et al. The use of diffusion-weighted MR imaging in the functional assessment of the testes of patients with clinical varicocele [J]. *Andrologia*, 2019, 51(3): e13197
- [16] George T, Williams EH, Franklin R, et al. Two-Team Surgical Approach to Improve Retroperitoneal Nerve Identification in the Treatment of Groin Pain[J]. *Ann Plast Surg*, 2019, 82(1): 82-84
- [17] Turcu F, Arnăutu O, Copaescu C. Adhesiolysis-Related Challenges for Laparoscopic Procedures after Ventral Hernia Repair with Intraperitoneal Mesh[J]. *Chirurgia (Bucur)*, 2019, 114(1): 39-47
- [18] 张迁, 苏宏伟, 韩磊, 等. 显微镜下三种精索静脉结扎术治疗精索静脉曲张的临床比较[J]. *山东医药*, 2016, 56(16): 88-89
- [19] Hosseini K, Nejatifar M, Kabir A. Comparison of The Efficacy and Safety of Palomo, Ivanissevich and Laparoscopic Varicoelectomy in Iranian Infertile Men with Palpable Varicocele [J]. *Int J Fertil Steril*, 2018, 12(1): 81-87
- [20] 黄泽海, 梁桑, 王子明, 等. 3 种手术方式治疗成人精索静脉曲张疗效比较[J]. *实用医学杂志*, 2018, 34(23): 3929-3932
- [21] Wu X, Liu Q, Zhang R, et al. Therapeutic efficacy and safety of laparoscopic surgery versus microsurgery for varicocele of adult males: A meta-analysis[J]. *Medicine (Baltimore)*, 2017, 96(34): e7818
- [22] 田华晓. 两种精索静脉结扎术治疗精索静脉曲张性不育的效果比较[J]. *国际泌尿系统杂志*, 2016, 36(3): 395-398
- [23] 王利, 李贵斌, 宋连杰, 等. 经脐单孔腹腔镜与传统腹腔镜手术治疗青少年精索静脉曲张的临床比较研究 [J]. *临床泌尿外科杂志*, 2016, 31(10): 926-928
- [24] Chan P, Parekattil SJ, Goldstein M, et al. Pros and cons of robotic microsurgery as an appropriate approach to male reproductive surgery for vasectomy reversal and varicocele repair [J]. *Fertil Steril*, 2018, 110(5): 816-823
- [25] 陈晓震, 邓炜林, 龙永其, 等. 显微外科与腹腔镜途径精索静脉结扎术治疗精索静脉曲张的疗效对比研究[J]. *中国现代手术学杂志*, 2017, 23(1): 65-67
- [26] Çayan S, Şahin S, Akbay E. Paternity Rates and Time to Conception in Adolescents with Varicocele Undergoing Microsurgical Varicocele Repair vs Observation Only: A Single Institution Experience with 408 Patients[J]. *J Urol*, 2017, 198(1): 195-201
- [27] Lv JX, Wang LL, Wei XD, et al. Comparison of Treatment Outcomes of Different Spermatic Vein Ligation Procedures in Varicocele Treatment[J]. *Am J Ther*, 2016, 23(6): e1329-e1334
- [28] 廖开森, 任黎刚, 陈静. 两种微创手术治疗精索静脉曲张的疗效分析[J]. *临床泌尿外科杂志*, 2016, 32(4): 299-302
- [29] 邵为民, 斯坎达尔, 阿不来提·买买提明, 等. 显微镜下不同的手术方式治疗精索静脉曲张的效果分析 [J]. *中国性科学*, 2018, 27(4): 15-19
- [30] 袁仁斌, 卓晖, 潘玉龙, 等. 经显微镜和经腹腔镜术式对未成年人精索静脉曲张疗效的 Meta 分析 [J]. *国际泌尿系统杂志*, 2017, 37(6): 883-887