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· 临床研究 ·

TURP 联合经尿道膀胱颈切开术治疗小体积前列腺增生所致膀胱出口梗阻的疗效分析

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摘要 目的:探讨经尿道前列腺电切术(TURP)联合经尿道膀胱颈切开术(TUIBN)治疗小体积前列腺增生(BPH)所致膀胱出口梗阻的疗效。**方法:**选择 2009 年 1 月~2013 年 12 月我院收治的小体积 BPH 患者,其中单纯经尿道前列腺电切术(TURP 组)48 例,经尿道前列腺电切术联合经尿道膀胱颈切开术(TURP+TUIBN 组)48 例。比较两组的术前、术后国际前列腺症状评分(IPSS)、残余尿量(PVR)、最大尿流率(Qmax)等,以及术后并发症的发生情况。**结果:**TURP+TUIBN 组术中出血量较 TURP 组明显增多($P<0.05$),两组手术时间、组织切除质量比较,差异均无统计学意义($P>0.05$);与 TURP 组比较,TURP+TUIBN 组术后 6 个月 IPSS 评分、PVR 明显下降,Qmax、膀胱压力明显上升($P<0.05$);TURP+TUIBN 组并发症发生率为 4.2%,显著低于 TURP 组 16.7%($P<0.05$)。**结论:**TURP+TUIBN 治疗小体积前 BPH 所致膀胱出口梗阻,可彻底切除增生腺体,消除小体积 BPH 的各种梗阻因素,减少术后膀胱颈挛缩的发生。

关键词:前列腺增生;经尿道前列腺电切术;经尿道膀胱颈切开术;膀胱颈挛缩

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Clinical Effect of TURP Combined with TUIBN for Bladder Outlet Obstruction Caused by Small-size Benign Prostatic Hyperplasia

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ABSTRACT Objective: To explore the effect of transurethral resection of prostate (TURP) combined with transurethral incision of the bladder neck (TUIBN) for bladder outlet obstruction caused by small-size benign prostatic hyperplasia (BPH). **Methods:** 98 patients with small-size BPH who received treatment in our hospital from January 2009 to December 2013 were included. All the cases were treated by TURP+TUIBN and TURP, respectively. The international prostate symptom score(IPSS), maximum urinary flow rate (Qmax) and postvoid residual urine volume(PVR), bladder neck contracture were compared between the two groups. **Results:** The blood loss during operation were significantly lower in TURP group than that in TURP+TUIBN group ($P<0.05$), while there were no significant difference on operation time and prostatic tissues resected ($P>0.05$). Compared with TURP group, the IPSS score, PVR reduced, Qmax, and bladder pressure increased in TURP+TUIBN group ($P<0.05$). The incidence of complications in TURP+TUIBN group (4.2%) was significantly lower than that in TURP group (16.7%) ($P<0.05$). **Conclusions:** TURP combined with TUIBN for bladder outlet obstruction caused by small-size BPH, can remove completely hyperplasia gland, eliminate all the obstruction factors of BPH, and reduce the occurrence of postoperative bladder neck contracture.

Key words: Benign prostatic hyperplasia; TURP; TUIBN; Bladder neck contracture

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前言

前列腺增生症(BPH)是泌尿系统的常见疾病,好发于 50 岁以上的老年人。经尿道前列腺电切术(TURP)以其创伤小、恢

复快等优势已被视为治疗 BPH 的金标准^[1,2],但由于小体积(<30 g)前列腺极易导致膀胱出口梗阻,且增生腺体本身对尿道产生的压迫作用并不占主导地位,单纯 TURP 无法兼顾多方面病因治疗,效果欠佳。研究显示,小体积 BPH 患者 TURP 术后膀胱颈挛缩的发生率高达 10%^[3-5]。本研究采用 TURP 联合经尿道膀胱颈切开术(TUIBN)治疗小体积 BPH 所致膀胱出口梗阻患者,旨在为提高经尿道手术治疗小体积 BPH 的疗效提供参考。

1 资料与方法

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1.1 一般资料

选择 2009 年 1 月~2013 年 12 月我院收治的小体积 BPH 患者,共 96 例。入组标准:(1)均符合小体积 BPH 的诊断标准,即存在明确的下尿路梗阻症状,前列腺重量 <30g,尿动力学检查显示膀胱出口梗阻;(2)年龄 40~80 岁,药物治疗效果不佳;(3)排除前列腺癌、神经源性膀胱、膀胱逼尿肌收缩无力等。年龄 42~79 岁,平均(58.3±5.7)岁;病史 0.5~12 年,平均(3.7±1.6)年。术前国际前列腺症状评分(IPSS)23~34 分,平均(24.1±4.8)分;前列腺炎病史 16 例,反复尿潴留病史 23 例,并发肾积水 4 例,并发膀胱结石 11 例。将 96 例患者按照随机数字表法分为 TURP 组和 TURP+TUIBN 组,各 48 例。两组患者年龄、病史、IPSS、前列腺重量等差异无统计学意义($P>0.05$),具有可比性。

1.2 方法

所有患者均行连续硬膜外麻醉,取截石位,采用 F26 STORZ 电切镜行 TURP,气化功率为 100~120W,电凝功率 60~80W,电切前列腺增生组织至外科包膜,膀胱颈达环形纤维。TURP+TUIBN 组在此基础上继续切除膀胱颈部增厚的纤维组织,采用针形电极在 5、7 点钟位置放射状切开膀胱颈口直达精阜,深度以可见包膜外脂肪组织为准,使三角区至精阜平

坦,膀胱颈呈漏斗状。两组患者术后均常规留置 F22 三腔气囊尿管引流,采用生理盐水持续冲洗膀胱,直至冲洗液清亮。术后 3~5d 拔出尿管试行排尿。

1.3 观察指标

(1)术中各观察指标:观察两组患者的手术时间、术中出血量、组织切除质量;(2)尿流动力学检测:分别于手术前后进行两组患者 IPSS 评分及尿流动力学检测,包括残余尿量(PVR),最大尿流率(Q_{max}),膀胱压力;(3)术后随访:术后 6 个月随访复查,观察两组患者膀胱颈挛缩等并发症的发生情况。

1.4 统计分析方法

采用 SPSS 18.0 软件包进行统计分析。计数比较采用 χ^2 检验,计量比较采用成组和配对 t 检验, $P<0.05$ 视为有统计学意义。

2 结果

2.1 两组术中各观察指标比较

所有患者手术均顺利,腺体组织切除完全,均无大出血、尿道直肠穿孔等严重并发症。TURP+TUIBN 组术中出血量较 TURP 组明显增多,差异均有统计学意义($P<0.05$);两组的手术时间、组织切除质量比较,差异均无统计学意义($P>0.05$)。见表 1。

表 1 两组术中各观察指标比较($\bar{x}\pm s$)

Table 1 Comparison of intraoperative observation indicators ($\bar{x}\pm s$)

Group	n	Time of operation(min)	Weight of resection(g)	Intraoperative blood loss(mL)
TURP group	48	26.7±7.9	10.1±2.7	67.4±31.7
TURP+TUIBN group	48	29.4±10.6	9.3±2.3	75.5±28.9
t		1.27	0.51	3.21
P		>0.05	>0.05	<0.05

2.2 两组手术前后 IPSS 评分及尿流动力学比较

治疗前,两组 IPSS 评分及尿流动力学比较,差异均无统计学意义($P>0.05$);与 TURP 组比较,TURP+TUIBN 组术后 6 个月

IPSS 评分、PVR 明显下降, Q_{max} 、膀胱压力明显上升,差异均有统计学意义($P<0.05$)。见表 2。

表 2 两组手术前后 IPSS 评分及尿流动力学比较($\bar{x}\pm s$)

Table 2 Comparison of IPSS score and urodynamics before and after surgery ($\bar{x}\pm s$)

Group	N	IPSS score (scores)		Bladder pressure (cmH ₂ O)		Q_{max} (mL/s)		PVR(mL)	
		治疗前	治疗后	治疗前	治疗后	治疗前	治疗后	治疗前	治疗后
TURP group	48	25.8±4.2	16.7±5.7 [▲]	28.1±5.2	41.2±6.4 [▲]	7.6±2.2	8.2±2.4	87.6±2.2	32.5±6.2 [▲]
TURP+TUIBN group	48	24.9±5.3	8.2±2.6 [▲]	27.7±4.7	52.4±7.3 [▲]	7.8±3.1	14.4±3.7 [▲]	88.8±3.1	15.7±5.6 [▲]
t		0.99	6.08	1.06	4.52	0.87	4.59	0.87	7.76
P		>0.05	<0.05	>0.05	<0.05	>0.05	<0.05	>0.05	<0.05

2.3 术后随访

术后 6 个月均获得随访复查,TURP 组出现海绵体部尿道狭窄 3 例,出现膀胱颈挛缩 5 例,表现为排尿困难,其中 3 例经 TUIBN 后痊愈,1 例经尿道扩张术有所好转;TURP+TUIBN 组尿道外口狭窄 1 例,经尿道扩张术治愈。两组并发症发生率分别为 16.7%、4.2%,差异有统计学意义($\chi^2=4.02$, $P<0.05$)。

3 讨论

小体积 BPH 在临床上并不少见,其病理改变除了动力性

梗阻及机械梗阻因素以外,还存在膀胱颈环状纤维张力增高、逼尿肌膀胱颈功能失调、尿道内括约肌排列紊乱等其他梗阻性因素。许多研究亦认为,前列腺质量 <30 g 的 BPH 患者,其前列腺质量与其尿动力学无明显相关性,而膀胱颈环状纤维张力升高在膀胱出口梗阻中发挥更为重要的作用^[6,7]。鉴于此病理基础,TURP 的疗效不佳,术后易出现膀胱颈挛缩^[8-10]。因此,膀胱颈的处理是小体积 BPH 的腔内治疗成败的关键环节。

TUIBN 最早由 Orandi 提出,是针对膀胱颈环状纤维张力高的一种解决方法,采用针形电极,从膀胱颈口至精阜两侧放

射状切开,深达前列腺包膜,远侧切至精阜旁,使膀胱处于低压低位引流。有研究显示,TUIBN 的手术时间短、出血少、创伤小、逆行射精及膀胱颈挛缩的发生率低,手术效果满意^[11,12]。目前,临床上多主张采用 TURP 联合 TUIBN 治疗小体积 BPH 患者,在达到增生腺体组织切除的同时,切除颈部纤维组织并选择性切断内括约肌,从而实现梗阻的彻底解除并有效防止复发^[13-16]。本研究结果显示,两组的手术时间、组织切除质量比较,差异均无统计学意义 ($P>0.05$),TURP+TUIBN 组术中出血量较 TURP 组有所增加,但均在可接受范围内。此外,与 TURP 组比较,TURP+ TUIBN 组术后 6 个月 IPSS 评分、PVR 明显下降,Qmax、膀胱压力明显上升 ($P<0.05$)。进一步表明 TURP+TUIBN 既可彻底切除前列腺增生组织,又可充分扩大膀胱出口,从而兼顾多种病因的治疗,克服了单纯 TURP 的不足^[17,18]。

近年来,有研究认为随着时间的推移,TUIBN 术中切开的颈部环状纤维可能因瘢痕重新愈合而出现再梗阻,且由于颈后唇环状纤维增生并未切除,可能成为排尿梗阻的潜在危险因素^[19,20]。TURP+TUIBN 组并发症发生率为 4.2%,显著低于 TURP 组 16.7% ($P<0.05$),且未见膀胱颈挛缩。本术式选择性保留切点之间的原有纤维组织,加速创面上皮化,避免对尿液对创面的刺激以及过多新生瘢痕形成,从而有利于预防术后膀胱颈挛缩^[11,12]。

总之,TURP+ TUIBN 的疗效显著优于单纯 TURP,可在彻底切除增生腺体的同时,消除小体积 BPH 的各种梗阻因素,可减少术后膀胱颈挛缩的发生,且操作简单,是治疗小体积 BPH 所致膀胱出口梗阻的理想术式。由于本研究随访时间及样本量的限制,TURP+ TUIBN 的远期疗效尚待进一步验证。

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