

两种手术方式治疗原发性闭角型青光眼疗效比较

张鸿儒 欧阳珊 李睿姝 高维奇[△]

(哈尔滨医科大学附属第一医院眼科医院 黑龙江 哈尔滨 150001)

摘要 目的 探讨治疗原发性闭角型青光眼二种手术方式的适应症和初步临床疗效观察。方法 拟订手术适应症,对临床收治的 42 例 48 眼原发性闭角型青光眼进行手术处理 单纯抗青光眼手术 -- 小梁切除术 (Trabeculectomy, Trab)、青白联合手术 -- 超声乳化白内障吸除联合小梁切除 + 人工晶体植入术 (Phacotrabeculectomy+IOL, PhacoTrab+IOI)。比较不同适应症下二种手术方式初步的临床疗效。包括术前后眼压情况、前房深度、眼轴长度的变化。随访时间平均 1 个月。结果均经统计学处理。结果 原发性闭角型青光眼患者术后眼压有显著改变,有统计学差异,Trab 组手术后平均 (10.92 ± 1.74) mmHg, Phaco Trab+IOL 组手术后平均 (10.86 ± 1.73) mmHg。术后眼压明显降低 (t 检验, P 值 < 0.001), Trab 组和 Phaco Trab+IOL 组两组间术后眼压无显著差异 (t 检验, P 值 > 0.05)。Trab 组手术前后前房深度无统计学差异 (t 检验, P 值 > 0.05), Phaco Trab+IOL 组手术前后前房深度有统计学差异 (t 检验, P 值均 < 0.001)。术前分别为 (1.74 ± 0.16) mm、 (1.72 ± 0.16) mm, 术后分别为 (1.74 ± 0.17) mm、 (2.06 ± 0.14) mm。Trab 组及 Phaco Trab+IOL 组手术前后眼轴长度无统计学差异 (t 检验, P 值 > 0.05)。结论 青 - 白联合手术可以改善前房深度,明显降低眼压,不同手术方式适合不同的病人情况,但要注意适应症的选择。利用 A 超检查可快速、有效、准确地观察眼前节结构,有助于早期进行手术。

关键词 青光眼 闭角型 小梁切除术 超声乳化白内障吸除术 人工晶体植入术

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A Preliminary Comparison Study of Two Types of Microsurgery on Management of Primary Angle-closure Glaucoma

ZHANG Hong-ru, OUYANG Shan, LI Rui-shu, GAO Wei-qi[△]

(The Ophthalmology Hospital of The First Clinical College of Harbin Medical University, 150001 Harbin, China)

ABSTRACT Objective: Objective To investigate the indications and preliminary clinical results of two types of microsurgery on management of primary angle-closure glaucoma. **Methods:** The indications of two types of microsurgery were set up for a comparison study on 48 eyes (42 cases) with primary acute or chronic angle-closure glaucoma which were performed with trabeculectomy only (Trab group) and phacotrabeculectomy plus intraocular lens implantation (Phaco Trab + IOL group). The preliminary clinical results of two groups including the changes of the intraocular pressure (IOP), the anterior chamber depth and the ocular axial length were compared. The mean follow-up was one month. The results are all processed by the statistics. **Results:** The postoperative IOP were well changed (all $P < 0.001$). Before surgery the average IOP was respectively (17.68 ± 3.09) mmHg and (18.07 ± 2.92) mmHg in Trab group and in Phaco Trab + IOL group. After surgery the average IOP was respectively (10.92 ± 1.74) mmHg and (10.86 ± 1.73) mmHg. The postoperative IOP were reduced in two groups ($P < 0.001$). There were no significant differences in postoperative IOP between the Trab group and the Phaco Trab + IOL group (P value > 0.05). The anterior chamber depth (ACD) wasn't seen significantly changed in the Trab group (P value > 0.05), while it was seen deeper in the Phaco Trab + IOL group (P value < 0.001). Before surgery the average ACD was (1.74 ± 0.16) mm and (1.72 ± 0.16) mm respectively in trab group and in Phaco Trab + IOL group. After surgery the average ACD was (1.74 ± 0.17) mm and (2.06 ± 0.14) mm respectively. There were significant differences between the Trab group and the Phaco Trab + IOL group ($P < 0.001$). There was no statistically difference in ocular axial length before and after surgery (t test, P value > 0.05). **Conclusion:** The phacotrabeculectomy plus intraocular lens implantation operation could improve the anterior chamber depth significantly, and reduce the IOP obviously. It is important to pay attention to the indications and choose different operation method for different conditions of patients. Anterior segment structures in glaucoma can be measured effectively with ultrasonic scanning machine at A-mode.

Key words: Glaucoma; Angle-closure; Trabeculectomy; Phacoemulsification; Intraocular lens implantation

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作者简介 张鸿儒 (1984), 女, 硕士

△通讯作者 高维奇, 男, 教授, 主要研究方向 白内障, 青光眼, 角

膜病, Tel: 13796623232, E-mail: 35108602@qq.com

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前言

青光眼是主要致盲眼病之一^[1],在我国闭角型青光眼发病率约占所有青光眼患者的 60%-80%^[2]。小梁切除术目前仍是治疗原发性闭角型青光眼的主要手术方式^[3],超声乳化白内障吸除术联合小梁切除术、降压效果明显,前房稳定,最大限度的提高和恢复了患者有用的视力^[4]。本研究分析不同治疗方法对前房深度的影响,研究术前术后眼前节结构的变化,根据发病机制探讨手术治疗闭角型青光眼的有效性。结果如下:

1 资料与方法

1.1 临床资料

选择 2011 年 6 月至 2011 年 7 月在本病区确诊的 PACG 患者 42 例(48 只眼)。患者年龄 50~63 岁 男 18 例,女 24 例。其中急性闭角型青光眼 26 例(29 只眼),慢性闭角型青光眼 16 例(19 只眼)。术前均经药物控制眼压至正常范围,手术均由同一富有丰富临床经验的医生主刀完成。拟定手术适应症:原发性闭角型青光眼术前房角关闭大于 180°。术前瞳孔正常,未使用缩瞳剂或停用缩瞳剂至少 1 周;无合并或轻度白内障、患者视力 ≥ 0.5 者,选择单纯抗青光眼手术——小梁切除术(Trabeculectomy,Trab);同样条件但合并有手术指征的白内障、且患者视力 < 0.5 者,选择青白联合手术——超声乳化白内障吸除联合小梁切除+人工晶体植入术(PhacoTrab+IOL): (Phacotrabeculectomy+IOL, Phaco Trab+IOL) 术后无并发症出现,术后眼压随访均控制于正常范围。Trab 组有 22 例 26 眼,Phaco Trab+IOL 组有 20 例 22 眼。

1.2 手术方法

1.2.1 小梁切除术(Trab) 通常在上方,距角膜缘 5-6 mm 做以

角膜缘为基底的结膜瓣,巩膜瓣约 4 mm $\times$ 5 mm 大小、2/3-1/2 厚,分离至角膜缘内 1 mm,0.2 ms/ml 丝裂霉素棉片置于巩膜瓣下 2 分钟。在颞上方角膜缘内 1 mm 处行前房穿刺。应用小梁咬切器切除小梁组织,做周边虹膜切除,巩膜瓣顶端用 10-0 尼龙线各缝 1 针,查看房水滤过情况,调整巩膜缝线松紧度。关闭结膜瓣,可见有滤泡形成。术毕结膜下注射 2.5 mg 地塞米松。术后第 1 天开放点眼,复方硫酸新霉素滴眼液 4 次/d,连用 3-4 周。

1.2.2 超声乳化白内障吸除联合小梁切除+人工晶体植入术(PhacoTrab+IOL) 小梁切除术同上述,在同一切口完成超声乳化白内障吸除及人工晶体植入。

1.3 检查方法及观察指标

1.3.1 眼压测量 使用日本 Topcon 公司生产的 CT-80 非接触性眼压计,患者取坐位,消除颈部受压因素,调整头部高度,头正位,每眼重复测量三次,三次之间的差值不超过 2 mmHg 取其平均值,同一医师操作。

1.3.2 前房深度(ACD)、眼轴长度(AL)的测量 采用法国光大 BVI 公司生产的 A/B 型超声仪,A 超探头频率 10 MHz,该仪器前房、晶状体、玻璃体内声速分别为 1532 m/s、1641 m/s、1532 m/s,每眼自动测量 10 次,计算机自动处理并显示打印,取均值登记,同一医师操作。

1.4 统计学分析

各分组所得计量数据采用均数 $\pm$ 标准差($\bar{X} \pm S$)表示,用 SPSS17.0 软件处理数据,两组间均数比较用 t 检验。检验水准 $\alpha=0.05$, $P<0.05$ 有统计学意义。

2 结果

2.1 Trab 组

表 1 Trab 组治疗前后眼压、前房深度、眼轴长度比较($\bar{X} \pm S$)
Table 1 IOP, ACD, AL before and after treated with trabeculectomy

Time	IOP(mmHg)	ACD(mm)	AL(mm)
Before surgery	18.07 $\pm$ 2.92	1.74 $\pm$ 0.16	21.77 $\pm$ 1.89
After surgery	10.92 $\pm$ 1.74	1.74 $\pm$ 0.17	21.76 $\pm$ 1.85
t	12.665	-1.139	0.642
P	<0.001	>0.05	>0.05

2.2 Phaco + Trab+IOL 组

表 2 Phaco + Trab+IOL 组治疗前后眼压、前房深度、眼轴长度比较($\bar{X} \pm S$)
Table 2 IOP, ACD, AL before and after treated with trabeculectomy and phacotrabeculectomy+IOL

Time	IOP(mmHg)	ACD(mm)	AL(mm)
Before surgery	17.68 $\pm$ 3.09	1.72 $\pm$ 0.16	22.02 $\pm$ 1.59
After surgery	10.86 $\pm$ 1.73	2.06 $\pm$ 0.14	22.02 $\pm$ 1.78
t	8.865	-8.004	0.783
P	<0.001	<0.001	>0.05

2.3 Trab 组和 Phaco Trab+IOL 组治疗后各参数比较

表 3 Trab 组治疗后和 Phaco + Trab+IOL 组治疗后眼压、前房深度、眼轴长度比较($\bar{X} \pm S$)

Table 3 IOP, ACD, AL before and after treated with surgery in Trab group compared with Phaco Trab+IOL group

Group	IOP(mmHg)	ACD(mm)	AL(mm)
Trab group	10.92± 1.74	1.74± 0.17	21.76± 1.85
Phaco Trab+IOL group	10.86± 1.73	2.06± 0.14	22.02± 1.78
t	-0.109	-7.621	-0.421
P	>0.05	<0.001	>0.05

3 讨论

原发性青光眼是指病因机制尚未充分阐明的一类青光眼。根据眼压升高时前房角的状态——关闭或是开放,又可分为闭角型青光眼和开角型青光眼^[5]。

原发性闭角型青光眼(PACG)是由于周边虹膜堵塞小梁网或于小梁网产生永久性粘连,房水外流受阻,引起眼压升高的一类青光眼。患眼具有房角狭窄、周边虹膜易与小梁网接触的解剖特征。

原发性闭角型青光眼具有小角膜、浅前房、窄房角、眼轴短、晶状体较厚且位置前移等解剖特点,多数患者都存在不同程度的瞳孔阻滞^[6],具有眼前节拥挤的解剖特点。在原发性闭角型青光眼的后房亦存在小梁与睫状体距离缩短、巩膜与睫状体夹角值变小和虹膜与晶状体接触距离长的解剖特点。结合眼前房的特点构成了闭角型青光眼发病的基础。原发性闭角型青光眼的发病有诸多因素,除自身的解剖特点外,晶体位置前移导致的瞳孔阻滞及继而发生的房角变窄是原发性闭角型青光眼发病的共同机制,而睫状体肿胀、睫状体位置的改变及与年龄相关的晶体厚度增大是导致晶体位置前移的原发因素。

由本研究中的数据可以看出,小梁切除术术后各值与术前相比,眼压降低明显,前房深度无明显改变。术前眼压(18.07 ± 2.92) mmHg,术后(10.92 ± 1.74) mmHg, (t 检验, P 值<0.001) ;手术前后前房深度无统计学差异,术地为(1.74 ± 0.16) mm,术后为(1.74 ± 0.17) mm,前房深度无加深 (t 检验, P 值>0.05) ;手术前后眼轴长度无统计学差异 (t 检验, P 值>0.05) (表 1)。

小梁切除术的降眼压机制是不仅改变了房水外流通道,而且改善球内房水循环通道,使闭角眼前段的解剖形态趋向于正常。但主要还是依靠外引流作用,术后房水通过角膜缘滤口流入结膜囊下间隙,在巩膜与结膜之间形成滤过泡,大部分被周围组织吸收,小部分透过结膜与泪膜融合或被切口周围的血管淋巴吸收^[7]。

随年龄的增加,晶状体不断增大进一步加重瞳孔阻滞,而晶状体导致的瞳孔阻滞是发生闭角性青光眼的最重要原因之一^[8]。青光眼合并白内障的患者可采用分次或联合手术,分次手术加重了病人的心理及生理负担,增加了术中及术后并发症。而早在 1945 年 guyton 就报导了白内障摘除术有降低眼压作用^[9]。

现代青光眼手术方式,随着手术设备和现代显微手术水平提高,特别是 Phaco+IOL 的发展,发生了很大的变化。将超声乳化白内障吸除术引入青光眼的治疗,减少了由于大切口晶体囊外摘除术造成对青光手术的影响,因而手术成功率大大提高,并发症降低^[10]。白内障摘除后解除了瞳孔阻滞,小梁切除后

增加了房水外流通道,术后眼压控制理想。郭晓萍等^[11]报道认为这种降压作用可能与术后房角宽度增加、滤过加宽致 Schlemm 管引增强有关,且术前后房角越窄者,术后变化程度越大。青白联合手术术后眼压有显著改变,有统计学差异,术前眼压(17.68 ± 3.09) mmHg,术后(11.59 ± 2.42) mmHg, (t 检验, P 值<0.001) ;手术前后前房深度有统计学差异,术地为(1.72 ± 0.16) mm,术后为(2.06 ± 0.14) mm,前房深度明显加深 (t 检验, P 值<0.001) ;手术前后眼轴长度无统计学差异 (t 检验, P 值>0.05) (表 2)。

青白联合手术避免了抗青光眼手术后再施行白内障手术的难度^[12],联合手术治疗青光眼合并白内障仅需一次手术即可恢复有用视力,具有眼压控制好、视力恢复快、并发症少等特点,避免和减少了分期手术给患者造成的痛苦,缩短了复明时间,避免了多次手术造成的多次眼部损伤,减少了术后并发症的发生,避免分期手术所造成的血—房水屏障的破坏手术切口对小梁的损伤以及缝合所造成的小梁变形而引起的高眼压发生。青白联合手术较小梁切除术术后前房的加深(表 3),虹膜与晶状体间的间隙增大,解除了瞳孔阻滞,利于房水引流,提高了青光眼治疗的疗效及成功率,是当前青光眼合并白内障手术治疗的理想方法^[13-15]。

本文主要着眼于不同适应症对原发性闭角型青光眼治疗的初步临床疗效观察。研究结果表明,青白联合手术方式能很好地降低眼压,使前房深度加深。

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