

超声乳化吸除联合房角分离术治疗 PACG 合并年龄相关性白内障

张国全¹, 钟守国²

作者单位:¹(610213)中国四川省成都市天府新区人民医院眼科;²(610072)中国四川省成都市,四川省人民医院眼科

作者简介:张国全,本科,副主任医师,研究方向:白内障。

通讯作者:张国全. zhangguoquan12@126.com

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Efficacy of phacoemulsification combined with goniosynechialysis in treating primary angle - closure glaucoma with age-related cataract

Guo-Quan Zhang¹, Shou-Guo Zhong²

¹Department of Ophthalmology, Chengdu Tianfu New District People's Hospital, Chengdu 610213, Sichuan Province, China;

²Department of Ophthalmology, Sichuan Provincial People's Hospital, Chengdu 610072, Sichuan Province, China

Correspondence to: Guo - Quan Zhang. Department of Ophthalmology, Chengdu Tianfu New District People's Hospital, Chengdu 610213, Sichuan Province, China. zhangguoquan12@126.com

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Abstract

• **AIM:** To study clinical efficacy of phacoemulsification combined with goniosynechialysis in treating primary angle-closure glaucoma with age-related cataract.

• **METHODS:** Totally 66 cases (70 eyes) of patients with primary angle - closure glaucoma with age - related cataract treated in our hospital from February 2014 to February 2017 were selected as the objects of study. Retrospective analysis was implemented to their case data. There were 36 cases (38 eyes) of patients who were treated with phacoemulsification and intraocular lens implantation combined with goniosynechialysis were set as observation group, while the other 30 cases (32 eyes) of patients who were treated with phacoemulsification and intraocular lens implantation alone were set as control group. Two groups were compared for total success rate of surgery, the situation of eyesight, intraocular pressure, chamber depth and anterior chamber angle before and after surgery, moreover, the occurrences of complications were recorded.

• **RESULTS:** The absolute success rate of surgery in observation group was 63%, while that of control group was 47%, and the observation group was dramatically higher than control group, with statistical significance

($P < 0.05$). The total success rate of observation group was 87%, while that of control group was 84%, and the difference had no statistical significance ($P > 0.05$). The difference in terms of the number of people whose eyesight were < 0.1 , $0.1 - < 0.3$, $0.3 - 0.5$ or > 0.5 before surgery compared with after surgeries had statistical significance ($Z_{\text{observation group}} = 7.545$, $Z_{\text{control group}} = 7.213$; $P < 0.05$), while the difference between groups after surgery had no statistical significance ($Z = -1.456$, $P > 0.05$). After surgery, the intraocular pressure of both groups decreased significantly ($t_{\text{observation group}} = 3.323$, $P_{\text{observation group}} = 0.001$; $t_{\text{control group}} = 10.394$, $P_{\text{control group}} < 0.01$), and the observation group was significantly lower than control group after surgery, with a difference having statistical significance ($t = 14.802$, $P < 0.01$). Chamber depth of both groups decreased dramatically after surgery ($t_{\text{observation group}} = 0.411$, $P_{\text{observation group}} < 0.01$; $t_{\text{control group}} = 15.621$, $P_{\text{control group}} < 0.01$), and the difference between groups after surgery had statistical significance ($t = 15.246$, $P < 0.01$). The occurrence rate of complications in observation group was 11%, while that of control group was 25%, and observation group was significantly lower than control group, having statistical significance ($\chi^2 = 4.409$, $P = 0.036$).

• **CONCLUSION:** Goniosynechialysis combined with phacoemulsification have obvious efficacy in treating primary angle-closure glaucoma complicated with age-related cataract. It performs better in controlling intraocular pressure after surgery with lower occurrence rate of complication.

• **KEYWORDS:** phacoemulsification; goniosynechialysis; primary angle-closure glaucoma; age-related cataract

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摘要

目的:探讨超声乳化吸除术联合房角分离术治疗原发性闭角型青光眼(primary angle-closure glaucoma, PACG)合并年龄相关性白内障的临床疗效。

方法:回顾性分析2014-02/2017-02于我院治疗原发性闭角型青光眼合并年龄相关性白内障患者66例70眼,按照治疗方式不同分为两组。将采用超声乳化白内障吸除人工晶体植入术+房角分离术治疗的患者36例38眼设为观察组,未联合房角分离术的患者30例32眼设为对照组。比较两组患者手术总成功率,手术前后视力、

眼压、前房深度,并记录并发症发生情况。

结果:观察组手术绝对成功率为63%,对照组为47%,观察组显著高于对照组,差异有统计学意义($P < 0.05$),观察组总成功率为87%,对照组为84%,差异无统计学意义($P > 0.05$)。两组手术前后视力 < 0.1 、 $0.1 \sim < 0.3$ 、 $0.3 \sim 0.5$ 、 > 0.5 人数比较差异具有统计学意义($Z_{观察组} = 7.545, P_{观察组} < 0.05; Z_{对照组} = 7.213, P_{对照组} < 0.05$),术后两组间比较差异无统计学意义($Z = -1.456, P > 0.05$)。两组患者术后眼压较术前降低,差异有统计学意义($t_{观察组} = 3.323, P_{观察组} = 0.001; t_{对照组} = 10.394, P_{对照组} < 0.01$);观察组眼压低于对照组,差异有统计学意义($t = 14.802, P < 0.01$)。两组患者术后前房深度较术前增加,差异有统计学意义($t_{观察组} = 0.411, P_{观察组} < 0.01; t_{对照组} = 15.621, P_{对照组} < 0.01$);观察组前房深度大于对照组,差异有统计学意义($t = 15.246, P < 0.01$)。观察组术后并发症发生率为11%,对照组并发症发生率为25%,观察组显著低于对照组,差异有统计学意义($\chi^2 = 4.409, P = 0.036$)。

结论:超声乳化吸除术联合房角分离术治疗原发性闭角型青光眼合并年龄相关性白内障疗效确切,术后眼压控制效果更佳,且并发症发生率更低。

关键词:超声乳化吸除术;房角分离术;原发性闭角型青光眼;年龄相关性白内障

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0 引言

原发性青光眼与年龄相关性白内障是我国中老年人群最常见的两种眼科疾病^[1]。随着我国老龄人口基数越来越大,原发性闭角型青光眼合并年龄相关性白内障也较为常见,给患者的生活质量带来较大困扰^[2-3]。我院采用超声乳化吸除术联合房角分离术治疗原发性闭角型青光眼(primary angle-closure glaucoma, PACG)合并年龄相关性白内障取得了良好的疗效,报告如下。

1 对象和方法

1.1 对象 回顾性分析2014-02/2017-02于我院收治的原发性闭角型青光眼合并年龄相关性白内障患者66例70眼,按照手术方式不同分为两组。将采用超声乳化白内障吸除人工晶状体植入术+房角分离术治疗的患者36例38眼设为观察组,未联合房角分离术的患者30例32眼设为对照组。观察组36例38眼中男17例19眼,女19例19眼;年龄49~80(平均65.43±4.34)岁;睫状体阻滞型24眼,晶状体-虹膜阻滞型14眼;对照组30例32眼中男14例16眼,女16例16眼;年龄51~80(平均66.01±4.65)岁;睫状体阻滞型20眼,晶状体-虹膜阻滞型12眼。纳入标准:符合赵家良《眼科疾病临床诊疗规范教程》^[4];青光眼急性发作≤3次,持续时间≤2d,病程≤1a;粘连性房角关闭<180°;排除标准:其他类型白内障者;合并视网膜脱落、角膜炎等其他眼科疾病;眼部手术史、外伤史。两组患者年龄、性别等一般资料比较差异无统计学意义($P > 0.05$),具有可比性。

1.2 方法 术前使用药物将眼压降至30mmHg以下。术前3d采用5g/L左氧氟沙星滴眼液滴眼,6次/d。术前

表1 两组患者手术成功率比较

组别	眼数	绝对成功	相对成功	无效	总成功
观察组	38	24	9	5	33
对照组	32	15	12	5	27

注:观察组:采用超声乳化白内障吸除人工晶状体植入术+房角分离术治疗;对照组:仅采用超声乳化白内障吸除人工晶状体植入术治疗。

表2 两组患者手术前后视力比较

组别	眼数	时间	<0.1	0.1~<0.3	0.3~0.5	>0.5
观察组	38	术前	15	13	8	2
		术后3mo	3	7	10	18
对照组	32	术前	13	11	7	1
		术后3mo	2	6	8	16

注:观察组:采用超声乳化白内障吸除人工晶状体植入术+房角分离术治疗;对照组:仅采用超声乳化白内障吸除人工晶状体植入术治疗。

1h采用复方托吡卡胺滴眼液散瞳。进行泪道和结膜囊冲洗。两组患者均进行表面麻醉。对照组患眼只行超声乳化白内障吸除人工晶状体植入术,做一透明角膜隧道切口后进行连续环形撕囊,随后水分离,采用超声乳化技术将晶状体核吸除,I/A灌注完全吸除皮质,随后进行囊抛光,将规格适宜的折叠式人工晶状体植入囊袋内。观察组在对照组治疗基础上加用房角分离术,超声乳化白内障吸除人工晶状体植入术与对照组保持一致,在完成手术后进行房角分离,沿房角从主切口及辅助切口将透明质酸钠360°缓慢注入,达到分离房角的目的,采用房角镜观察前房角。如注入透明质酸钠未将房角粘连完全分离,可采用辅助钩及I/A在灌注水的同时分离房角,生理盐水冲洗脱落的色素组织等并仔细吸除,术后包扎术眼。术后1d采用复方托吡卡胺滴眼液滴眼,1次/d,采用妥布霉素地塞米松滴眼液滴眼,6次/d。观察术前、术后3mo眼压、视力及前房深度^[5]。

疗效判定标准:手术效果评价^[6]:绝对成功:术后不使用降压药物,控制眼压在10~21mmHg;相对成功:术后6~10mmHg,或者术后需要采用1~2种降压药物控制眼压在10~21mmHg;无效:术后持续低眼压,或超过两种降压药使用仍无法有效控制的高眼压,发生严重并发症。总成功率=(绝对成功+相对成功)/总眼数×100%。

统计学分析:采用SPSS17.00统计软件进行分析,计数资料采用 χ^2 检验,计量资料行配对样本 t 检验和独立样本 t 检验,等级资料采用Wilcoxon秩和检验,当 $P < 0.05$ 时表示差异存在统计学意义。

2 结果

2.1 两组患者手术成功率比较 观察组手术绝对成功率为63%,对照组为47%,观察组显著高于对照组,差异有统计学意义($P < 0.05$),观察组总成功率为87%,对照组为84%,差异无统计学意义($P > 0.05$),见表1。

2.2 两组患者手术前后视力比较 两组手术前后视力<0.1、0.1~<0.3、0.3~0.5、>0.5人数比较差异具有统计学意义($Z_{观察组} = 7.545, P_{观察组} < 0.05; Z_{对照组} = 7.213, P_{对照组} < 0.05$),术后组间比较差异无统计学意义($Z = -1.456, P > 0.05$),见表2。

表3 两组患者治疗前后眼压和前房深度比较 $\bar{x} \pm s$

组别	眼压 (mmHg)		前房深度 (mm)	
	术前	术后 3mo	术前	术后 3mo
观察组	27.32±4.54	14.56±2.32	1.86±0.34	3.26±0.41
对照组	28.54±4.51	16.32±3.30	1.89±0.33	3.22±0.40

注:观察组:采用超声乳化白内障吸除人工晶状体植入术+房角分离术治疗;对照组:仅采用超声乳化白内障吸除人工晶状体植入术治疗。

2.3 两组患者手术前后眼压和前房深度比较 两组患者术后眼压较术前降低,差异有统计学意义($t_{\text{观察组}} = 3.323$, $P_{\text{观察组}} = 0.001$; $t_{\text{对照组}} = 10.394$, $P_{\text{对照组}} < 0.01$);观察组眼压低于对照组,差异有统计学意义($t = 14.802$, $P < 0.01$)。两组患者术后前房深度较术前增加,差异有统计学意义($t_{\text{观察组}} = 0.411$, $P_{\text{观察组}} < 0.01$; $t_{\text{对照组}} = 15.621$, $P_{\text{对照组}} < 0.01$);观察组前房深度大于对照组,差异有统计学意义($t = 15.246$, $P < 0.01$),见表3。

2.4 两组患者并发症比较 随访期间,观察组术后浅前房2眼,角膜水肿2眼,并发症发生率为11%,对照组浅前房2眼,角膜水肿2眼,低眼压4眼,并发症发生率为25%,观察组显著低于对照组,差异有统计学意义($\chi^2 = 4.409$, $P = 0.036$)。

3 讨论

青光眼是各种原因导致的眼压间断或持续升高的一种常见眼病,高眼压的持续可能对眼球各部分组织和视力造成损害,如不加以及时有效地治疗,可能导致视力急剧降低,严重者甚至失明^[7]。其主要病理机制为逐渐增大的晶状体向瞳孔缘靠近,后房房水无法顺利通过瞳孔进入前房,引起后房压力逐渐增高,压迫周边虹膜导致虹膜膨隆而出现前房角关闭。年龄相关性白内障是白内障的最常见类型^[8]。50岁以上的中老年人群患病率最高,且发病率随年龄增长而增高。有学者认为它与老年代谢缓慢而出现退行性变有关,不过大多数患者病情进展缓慢,主要因晶状体混浊而导致视力下降^[9]。超声乳化白内障吸除人工晶状体植入术是当前主要的治疗方法,其解除了晶状体混浊现象,使大多数患者在术后视力不同程度提高,本探究两组术后视力均有显著提升,也证实该手术的有效性,且结果与国内外众多临床报道相一致^[10]。

两组前房深度均显著改善,这是因为超声乳化术的操作基础为密闭高灌注压,房角受到灌注液的反复冲洗^[11],既能重新开放部分粘连、关闭的房角,还可将粘附于房角的色素颗粒、炎性物质进行冲洗,黏弹剂也能机械性作用于前房角使其分离^[12]。术后眼压观察发现,观察组眼压更趋于正常值,无低眼压出现,手术绝对成功率更高,提示观察组患眼术后眼压更为稳定,其原因在于解除了晶状体因素造成的瞳孔阻滞,虹膜后移,加深前房、虹膜平坦促进房角开放^[13],进一步分离开超声乳化术后仍然发生粘连的前房角,有效阻止进一步前房角粘连,使眼压控制更稳定^[14]。Wright等^[15]超声乳化白内障吸除人

工晶状体植入术+房角分离术治疗40眼原发性闭角型青光眼合并年龄相关性白内障,相较于未加用房角分离术者术后低眼压发生人数明显较少,且术后降眼压药物的使用率更低,证实前者术后眼压控制更为稳定,这也与本探究结果保持一致。术后并发症来看,观察组并发症发生率为11%,显著低于对照组,证实加用房角分离术不仅未增加并发症人数,反而疗效更为稳定。

综上所述,超声乳化吸除术联合房角分离术治疗原发性闭角型青光眼合并年龄相关性白内障疗效确切,术后眼压控制效果更佳,且并发症发生率更低。

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