doi: 10.13241/j.cnki.pmb.2017.17.032

视网膜激光光凝与复合式小梁切除术治疗新生血管性青光眼的临床疗效对比

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摘要 目的:观察和比较视网膜激光光凝与复合式小梁切除术治疗新生血管性青光眼(NVG)的临床疗效和安全性。**方法:**选择2013年1月～2015年6月我院收治的新生血管性青光眼患者85例,随机分为两组,观察组采用视网膜激光光凝术治疗,对照组采用复合式小梁切除术治疗,比较两组的临床疗效和并发症的发生情况。**结果:**两组术后眼压均较治疗前明显降低(P<0.05),且观察组明显低于对照组(P<0.05);两组术后视力、虹膜新生血管退化情况相比差异无明显统计学意义(P>0.05);观察组术中、术后前房出血发生率均明显低于对照组(P<0.05)。**结论:**视网膜激光光凝与复合式小梁切除术对新生血管性青光眼均有较好的治疗效果,复合式小梁切除术对患者眼压控制效果更好,安全性更高。

关键词:视网膜激光光凝;复合式小梁切除;新生血管性青光眼

中图分类号:R775.9 **文献标识码:**A **文章编号:**1673-6273(2017)17-3228-03

Comparison of the Clinical Effect of Retinal Laser Photocoagulation and Compound Trabeculectomy in the Treatment of Neovascularity Secondary Glaucoma

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ABSTRACT Objective: To investigate the clinical effect of retinal laser photocoagulation and compound trabeculectomy in the treatment of neovascularity secondary glaucoma (NVG). **Methods**: 85 cases of patients with NVG admitted in our hospital from January 2013 to June 2016 were selected and divided into the observation group and the control group. Patients in the observation group were treated with retinal laser photocoagulation, and the control group was treated with compound trabeculectomy. The intraocular pressure, vision, iris neovascularization, functional filtering bleb and incidence of complications were compared between two groups. **Results:** The intraocular pressure after operation of both groups were significantly lower than those before operation(P<0.05), and the intraocular pressure of observation group at 1 year after operation was significant lower than that of the control group (P<0.05). No significant difference was found in the vision, degraded condition of iris neovascularization between two groups(P>0.05). The occurrence rate of traumatic hyphema intraoperative and postoperative of observation group were significantly lower than those of the control group (P<0.05). **Conclusion:** Both retinal laser photocoagulation and compound trabeculectomy in neovascularity secondary glaucoma was effective and safe in the treatment of NVG, and compound trabeculectomy was more effective and safe.

Key words: Retinal laser photocoagulation; Compound trabeculectomy; Neovascularity secondary glaucoma

Chinese Library Classification(CLC): R775.9 Document code: A

Article ID: 1673-6273(2017)17-3228-03

前言

新生血管性青光眼是以房角和虹膜新生血管为主要临床特征的青光眼,发病原因主要包括眼部炎症、眼肿瘤、视网膜缺血疾病、放射损伤和手术诱发等[1,2],其破坏性强、致盲率高,部分眼压过高患者甚至由于眼痛难忍、视力丧失而摘除眼球[3,4]。冷凝、光凝和手术是治疗新生血管性青光眼的常用方法,但单纯滤过手术术中极易出现前房出血,术后滤道周围纤维组织增殖和滤过口血凝块阻塞,治疗效果较差[5,6]。本研究对比分析了视网膜激光光凝与复合式小梁切除术治疗新生血管性青光眼的疗效,现报道如下。

1 资料与方法

1.1 一般资料

选择2013年2月～2015年12月我院新生血管性青光眼患者85例(85眼),按照治疗方法的不同分为两组。观察组43

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(收稿日期:2016-12-08 接受日期:2016-12-29)

例(43 眼),男 25 例(25 眼),女 18 例(18 眼);年龄 26~72 岁,平均 46.35± 7.58 岁;继发于糖尿病视网膜病变 14 例,视网膜中央静脉阻塞 16 例,视网膜中央动脉阻塞 2 例,静脉周围炎 5 例,3 例原因不明,为高度近视。对照组 42 例(42 眼),男 25 例(25 眼),女 17 例(17 眼);年龄 26~72 岁,平均 46.35± 7.58 岁;继发于糖尿病视网膜病变 15 例,视网膜中央静脉阻塞 16 例,视网膜中央动脉阻塞 2 例,静脉周围炎 4 例,3 例原因不明,为高度近视。两组的基线资料比较差异均无统计学意义(P>0.05),具有可比性。

1.2 治疗方法

对照组:局麻状态下剪开球结膜,作以穹窿部为基底的板层结膜瓣,用 0.02 %~0.04 %丝裂霉素棉片放在巩膜瓣下 4~5 min,用平衡液反复冲洗干净,在颞侧周边透明角膜进行前房穿刺,切除瓣下 1.5 mm× 2.0 mm 的小梁组织,并切除周边虹膜,缝合球结膜和巩膜瓣。结膜下注射地塞米松 2.5 mg,庆大霉素 8 mg,氟尿嘧啶 2.5 mg。

观察组:采用蔡司公司 532 nm 激光仪进行视网膜激光光凝术。激光参数设置如下:光斑直径中周部为 200~350 μm,后极部为 100~200 μm,曝光时间为 0.1~0.2 s,输出功率为 250~450 mW。每次光凝间隔 5~7 天。

1.3 观察指标

观察两组术后的眼压、视力、虹膜新生血管、功能性滤过泡和并发症的发生情况。

1.4 统计学分析

采用 SPSS15.00 软件,计量资料(眼压、年龄等)以 $\bar{x}\pm s$ 表示,组间对比用 t 检验,组间率(视力、虹膜新生血管、功能性滤过泡的发生情况等) 的比较用 x^2 检验,P<0.05 为差异有统计学意义。

2 结果

2.1 两组治疗前后眼压的比较

两组术后眼压均较术前明显降低(P<0.05),且观察组明显低于对照组(P<0.05),见表 1。

表 1 两组治疗前后眼压的比较($\bar{x}\pm s$,mmHg)

Table 1 Comparison of the intraocular pressure between two groups before and after operation ($\bar{x}\pm s$, mmHg)

Groups	Number of eye	Pre-operation	At one week after operation	At one year after operation
Control group	42	40.25± 6.32	14.15± 5.32[a]	16.25± 5.63[a,b]
Observation group	43	40.38± 5.75	13.26± 5.45[a]	25.63± 5.79[a]

Note: Compared with control group, [a] P<0.05, Compared with pre-operation, [b] P<0.05.

2.2 两组治疗前后视力情况的比较

术后 1 年,对照组:矫正视力下降者 4 例,视力不变者 25 例,增加者 13 眼;观察组:矫正视力下降者 3 例,视力不变者 26 例,增加者 14 眼;两组视力情况相比差异无统计学意义(P>0.05)。

2.3 两组虹膜新生血管的比较

术后 1 年,对照组:虹膜新生血管全部回退者 21 眼,部分回退者 16 眼,无回退者 5 眼;观察组:虹膜新生血管全部回退者 23 眼,部分回退者 17 眼,无回退者 3 眼;两组虹膜新生血管退化情况相比差异无统计学意义(P>0.05)。

2.4 两组功能性滤过泡发生情况比较

术后 1 年,对照组有功能性滤过泡 13 眼,占 30.95 %,观察组有 25 眼,占 58.14 %。观察组功能性滤过泡的发生率明显高于对照组(P<0.05)。

2.5 两组并发症的发生情况比较

对照组术中出现前房出血 16 例(38.09 %),术后早期出现前房出血 15 例(35.71 %);观察组的分别为 9 例(20.93 %)和 6 例(13.95 %),观察组术中、术后前房出血发生率均明显低于对照组(P<0.05)。

3 讨论

新生血管性青光眼是因小梁和虹膜表面出现新的纤维血管膜,造成角膜和虹膜内皮层相互粘连以及进行性房角关闭,导致房水循环受阻的一种难治性青光眼[7,8]。其发生机制为视网膜由于缺氧和缺血,血管形成因子、成纤维细胞生成因子产生并刺激虹膜新生血管形成,阻碍房水排出,导致开角青光眼的发生,而当前房角粘连,纤维血管膜收缩,则导致继发闭角型青光眼的发生[9,10]。主要临床表现包括高眼压、虹膜大量新生血管及眼球剧烈疼痛[11]。新生血管性青光眼多继发于视网膜中央静脉阻塞、糖尿病视网膜病变及视网膜静脉周围炎等慢性缺氧性疾病[12,13]。

由于新生血管性青光眼对抗青光眼药物敏感性较低,手术治疗效果如果不佳,易引起眼压再次升高或眼内出血,因而选择安全有效的手术方法至关重要[14,15]。视网膜激光光凝能有效增加视网膜血流,减少视网膜的新生血管的形成。激光光凝可以通过把视网膜血管的无灌注区封闭,来降低视网膜细胞的损伤,并减少因缺氧和缺血而形成的新生血管因子,从而减少眼底新生血管的生成[16,17]。而对于已经形成的新生血管,采用激光光凝可以使新生血管缩小甚至消失,从而降低眼压[18]。复合式小梁切除术是治疗各种青光眼的首选手术方法,为房水排出建立了良好的外引流通道,能缓解术中和术后患者发生一过性的眼压升高,从而防止眼压波动过大对视神经造成的损伤,保护患者的视功能免受进一步的损害[19,20]。但临床上尚未见关于视网膜激光光凝与复合式小梁切除术治疗新生血管性青光眼疗效比较的研究报道。本研究结果显示观察组术后 1 年的眼压明显低于对照组,两组视力、虹膜新生血管退化情况相比无明显差异,术中、术后前房出血发生率均明显低于对照组,这提示复合式小梁切除术对于新生血管性青光眼患者,是一种安全有效

的手术方式。

综上所述,视网膜激光光凝与复合式小梁切除术对新生血管性青光眼均有较好的治疗效果,复合式小梁切除术对患者眼压控制效果更好,安全性更高。

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