

氩绿激光治疗视网膜分支静脉阻塞的临床疗效

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Clinical curative effect of argon chloride laser in treating retinal branch vein occlusion

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Abstract

• AIM: To study the clinical curative effect argon chlorine laser treatment in branch retinal vein occlusion (BRVO).

• METHODS: The 60 BRVO patients clinically confirmed by fundus fluorescein angiography (FFA) were randomly divided into 2 groups: group A (treatment group) 30 cases underwent argon chlorine laser photocoagulation; group B (control group) 30 cases were for activating blood circulation and eliminating stasis drugs (compound thrombosis the capsule). The results of visual acuity and macula edema regression in the two groups 6 months after treatment were compared.

• RESULTS: Group A: obviously effective in 8 cases, effective 20 cases. Group B: obviously effective in 2 cases, effective in 14 cases, invalid in 14 cases; Group A had 14 cases combined with macular edema, and after argon chlorine retinal photocoagulation, macular edema disappeared in 12 cases, not retreat in 2 cases; Group B had 13 cases combined with macular edema, and macular edema disappeared after medical treatment in 3 cases, not disappeared in 10 cases.

• CONCLUSION: The argon laser photocoagulation is an effective treatment for BRVO, promote the visual acuity, shorten the duration of symptoms.

• KEYWORDS: branch retinal vein occlusion; argon chlorine retinal photocoagulation; curative effect

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摘要

目的: 探讨氩绿激光治疗视网膜分支静脉阻塞的临床疗效。

方法: 经眼底荧光血管造影(FFA)确诊为视网膜分支静脉阻塞(BRVO)患者60例60眼。患者随机分两组:A组(治疗组)使用氩绿视网膜光凝治疗30例;B组(对照组)口服活血化瘀药物(复方血栓通胶囊)治疗30例;两组患者随访时间为治疗后1,3,6,12mo,随访内容为视力、FFA检查及眼底情况,对治疗6mo后视力恢复结果和黄斑水肿消退情况进行对比。

结果:A组:显效8例,有效20例,无效2例。B组:显效2例,有效14例,无效14例。A组合并黄斑囊样水肿者14例,给予氩绿视网膜光凝治疗后黄斑水肿消退12例,未消退2例;B组合并黄斑囊样水肿者13例,药物治疗后黄斑水肿消退3例,未消退10例,经卡方检验,差异有统计学意义($P < 0.05$)。

结论: 氩绿激光对视网膜分支静脉阻塞的激光治疗有显著疗效,激光治疗组治疗后6mo病情稳定,效果好。

关键词: 视网膜分支静脉阻塞; 氩绿视网膜光凝; 疗效

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0 引言

视网膜分支静脉阻塞(branch retinal vein occlusion, BRVO)是引起视功能障碍的常见视网膜血管性疾病,导致视力下降的主要原因有黄斑部水肿、视网膜新生血管形成、反复玻璃体出血、晚期新生血管性青光眼^[1,2]。目前国内治疗BRVO的方法主要为视网膜光凝、药物治疗及手术治疗(视网膜动静脉交叉鞘膜切开术)^[3]。我院2009-10/2012-06就诊的BRVO患者60例,随机分为视网膜光凝治疗及药物治疗组各30例,对比两组治疗效果,现报告如下。

1 对象和方法

1.1 对象 选择2009-10/2012-06就诊我院经眼底荧光血管造影(FFA)确诊的BRVO患者60例60眼,随机分为两组:A组(治疗组)30例患者,男14例,女16例,均为单眼,平均年龄55岁;B组(对照组)30例,男13例,女17例,均为单眼,平均年龄53.5岁。所有患者排除角膜病变、白内障及玻璃体混浊等疾病。激光治疗组患者适应证:BRVO患者;禁忌证:玻璃体出现患者,不合作患者及有精神病患者。药物治疗组患者适应证:BRVO患者,无药物过敏者,无出血倾向患者;禁忌证:复方血栓通过敏者,孕妇禁用。

1.2 方法 A组氩绿视网膜光凝治疗组:(1)术前眼科常规检查、视力、眼底检查、FFA检查;(2)选择波长514.5nm

的氩绿激光进行视网膜光凝治疗;(3)治疗前复方托吡卡胺眼药水散瞳,丙美卡因滴眼液表面麻醉3次,在全视网膜镜下通过裂隙灯观察眼底,并结合FFA检查报告进行视网膜光凝治疗。a如FFA提示视网膜无灌注区>5PD或伴有新生血管、血管渗漏明显未累及黄斑部,治疗行光凝视网膜毛细血管无灌注区、新生血管周围及视网膜出血区。光斑200 μm ,时间0.2s,II~III级光斑,间隔为1个光斑,可分1~2次进行完成。b如视网膜渗漏可能累及黄斑,导致黄斑部水肿,治疗必须加行视网膜黄斑部外围2~3排堤坝式光凝。c如合并黄斑部水肿,可同时行黄斑部格栅光凝,光斑100 μm 、时间0.1s,I级光斑、间隔1个光斑,分1~2次完成,光凝黄斑部距中心凹的最小距离为3PD,作一排光凝斑,对黄斑部血管区及视盘黄斑束一般不行光凝,避免在出血点上光凝,因氩绿激光易被血红蛋白吸收,使神经纤维层受损导致视力下降;(4)告知患者在光凝治疗过程中勿转动眼球,特别在黄斑部光凝时,以防损伤黄斑中心凹。B组:口服活血化瘀类中药(复方血栓通胶囊),每次3粒,3次/d,饭后服药。疗程3mo,每月后复查肝功能、肾功能及凝血检查及血常规,检查结果正常者继续服药。随访:A组及B组患者随访治疗后1,3,6,12mo。随访时间3~12mo。随访内容:治疗前后视力变化、眼底出血吸收情况、黄斑水肿消退情况及FFA检查。A组患者治疗后1,3mo复查FFA,如果仍有新生血管或荧光渗漏者及无灌注区再补充氩绿视网膜光凝治疗,发现黄斑部水肿未消退,仍需补充光凝治疗。

统计学分析:采用SPSS 11.5统计软件包进行 χ^2 检验, $P<0.05$ 为差异有统计学意义。

2 结果

2.1 疗效评判标准 (1)视力疗效判定以国际标准视力表为检测标准。显效:治疗后视力进步2行以上;有效:治疗后视力进步1行或2行为有效;无效:视力无进步或下降。术前视力<0.1者以视力增加0.02为评判标准。(2)黄斑水肿消退根据FFA检查结果判定,治疗后黄斑区渗漏完全消失者记为水肿完全消退;黄斑部渗漏较治疗前加重或仍水肿者记为黄斑水肿。

2.2 治疗效果 激光治疗组视力进步明显好于对照组($\chi^2=4.85, P<0.05$,表1)。A组合并黄斑囊样水肿者14例,氩绿视网膜光凝治疗后黄斑水肿消退12例(85.7%),未消退2例(14.3%);B组合并黄斑囊样水肿者13例,药物治疗后黄斑水肿消退3例(23.1%),未消退10例(76.9%),经统计学分析,差异有统计学意义($\chi^2=77.77, P<0.01$)。

3 讨论

BRVO多见于高血压、动脉硬化、糖尿病的老年患者,发病主要由于视网膜缺血缺氧加重毛细血管渗漏,导致视网膜水肿日益严重,视网膜无灌注区形成促进新生血管生成,黄斑部水肿,并导致反复视网膜出血,视力下降^[1,2]。

氩绿激光治疗BRVO的原理为光凝封闭视网膜毛细血管无灌注区,减少由缺血缺氧产生新生血管生长因子,从而预防新生血管形成^[3]。光凝促进视网膜与脉络膜产生散在粘连,使水肿的视网膜更靠近脉络膜毛细血管,使视网膜得到更多血供及加快新陈代谢减轻水肿。视网膜光凝破坏部分视网膜细胞,使其由瘢痕组织代替,减少视网膜耗氧量,促进视力恢复^[4]。黄斑部水肿采用格栅光凝可减少有临床意义的黄斑水肿,从而避免视力下降。

表1 两组治疗后视力疗效比较

分组	显效	有效	无效	眼(%)
治疗组	8(26.7)	20(66.7)	2(6.6)	
对照组	2(6.6)	14(46.7)	14(46.7)	

BRVO患者出现黄斑部水肿是造成视力下降的重要原因,一般把黄斑部水肿分局部水肿、弥漫水肿、囊样水肿和缺血性黄斑病变,缺血性黄斑水肿忌行激光治疗。黄斑部水肿的消退及视网膜光感受器的破坏对预后非常重要。由于黄斑部长期囊样水肿最终导致视力不可逆的视力障碍,本组患者中如果视网膜渗漏可能累及黄斑部,治疗视网膜黄斑部外围行2~3排堤坝式光凝,预防出现黄斑水肿,提高视力。治疗组对合并黄斑水肿患者进行早期黄斑部格栅光凝治疗,定期复查FFA,根据FFA检查了解黄斑水肿消退情况,必要时补充光凝。治疗组黄斑部格栅样光凝治疗黄斑部水肿消退85.7%,对照组行药物治疗黄斑消退23.1%,治疗组疗效显著,所以氩绿激光治疗有利黄斑部水肿消退,提高视功能。Duster^[5]报告氩激光治疗后1a黄斑部水肿消退者占83.3%,其非治疗组水肿一直未消退。张红等^[6]曾报道应用氩激光治疗BRVO所致黄斑水肿视力提高1行以上80.0%(24/30),与本文结果相符。

目前有研究报道,BRVO合并黄斑囊样水肿的患者视力随自身光感受器细胞层厚度的增加而提高,光感受器细胞内外节(IS-OS)层完全缺失的患者较存在IS-OS层的患者视力差^[7],该研究目前只是小样本结果,等待其大样本统计研究,如果大样本研究结果证实,OCT在治疗、预防及指导方面将有很重要作用。

BRVO早期氩绿激光治疗能够促进视网膜出血吸收,促进黄斑部水肿消退,缩短病程,减少并发症^[8]。激光治疗视网膜毛细血管无灌注区是预防和治疗新生血管的有效方法,早期及时的激光治疗更能保护和提高患者的有用视力^[9]。根据本治疗组及对照组视力疗效观察,治疗组治愈率93.4%,对照组治愈率53.3%,氩绿激光治疗BRVO疗效显著。BRVO的激光治疗是一个长期过程,随访时间要长,如患者视力正常,也要定期复查FFA检查,如在无灌注区光斑间有新的无灌注区出现者仍需要补做激光治疗。我们随访患者的时间最长为24mo,其中1个在激光治疗2a后再次补充激光治疗。

BRVO导致大面积无灌注区、新生血管形成以及导致反复的玻璃体出血、黄斑部水肿,其预后不良。氩绿激光光凝治疗及有效的黄斑部格栅光凝治疗是保护视功能及提高视力或维持视力稳定的最好治疗方案。

参考文献

- Azad R, Vivek K, Sharma Y, et al. Ranibizumab as an adjunct to laser for macular edema secondary to branch retinal vein occlusion. *Indian J Ophthalmol* 2012;60(4):263-266
- Gundogan FC, Tas A, Sobaci G. A comparative study between intravitreal triamcinolone and bevacizumab for macular edema due to central retinal vein occlusion with poor vision. *Indian J Ophthalmol* 2012;60(4):339-340
- Noma H, Funatsu H, Mimura T, et al. Perifoveal Microcirculation in Macular Oedema with Retinal Vein Occlusion. *Open Ophthalmol J* 2012;

6:63-64
4 Hayreh SS, Zimmerman MB, Podhajsky P. Hematologic abnormalities associated with various types of retinal vein occlusion. *Graefes Arch Clin Exp Ophthalmol* 2002;240(3):180-196
5 Duster YK. The rationale of argon laser photocoagulation for diabetic maculopathy. *J Postgrad Med* 1994;40:13-17
6 张红,高维奇. 氩激光治疗视网膜分支静脉阻塞所致黄斑水肿. 中国实用眼科杂志 2002;20(4):271-273

7 邹绚,戴荣平,董方田. 视网膜分支静脉阻塞伴黄斑样水肿患者对光感受器细胞层变化与视力之间关系的初步探讨. 中华眼科杂志 2010;46(11):1006-1010
8 Yilmaz T, Cordero-Coma M. Use of bevacizumab for macular edema secondary to branch retinal vein occlusion; a systematic review. *Graefes Arch Clin Exp Ophthalmol* 2012;250(6):787-793
9 戴成华. 激光治疗视网膜分支静脉阻塞疗效分析. 国际眼科杂志 2008;8(11):2330-2331

· 临床报告 ·

贝伐单抗联合曲安奈德玻璃体腔内注射治疗 DME 的疗效

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Investigation on effects of intravitreal injection of bevacizumab and triamcinolone acetonide for diabetes macular edema

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Abstract

• **AIM:** To investigate clinical effect of intravitreal injection of bevacizumab and triamcinolone acetonide for diabetes macular edema (DME).

• **METHODS:** There were 105 cases suffering diabetic macular edema. They were divided into three groups randomly, bevacizumab with triamcinolone group (35 cases), triamcinolone acetonide group (35 cases), and laser group (35 cases). Bevacizumab with triamcinolone group patients were given intravitreal injection of

bevacizumab and triamcinolone acetonide. Triamcinolone acetonide group patients were given intravitreal injection of triamcinolone. Laser group were given laser photocoagulation.

• **RESULTS:** All patients were followed up for 6 months. We observed patients' visual acuity, intraocular pressure, slit lamp, FFA and OCT. Among laser group patients, excellent in 12 cases (34.3%), effective 14 cases (40.0%), ineffective 9 cases (25.7%), total effective rate was 74.3%. Among triamcinolone group patients, excellent in 15 cases (42.9%), effective 18 cases (51.4%), ineffective 2 cases (5.7%), total effective rate was 94.3%. Among bevacizumab and triamcinolone group patients, excellent in 23 cases (65.7%), effective 12 cases (34.3%), ineffective 0 case, total effective rate was 100%. We analyzed these data by statistic method. We found excellence rate of bevacizumab and triamcinolone group was higher than other two groups', and the two differences were significant ($P < 0.05$ and $P < 0.01$). Total effective rate of bevacizumab with triamcinolone group and triamcinolone group both were significantly higher than laser group ($P < 0.01$ and $P < 0.01$). There were no significant differences between the total effective rates of bevacizumab with triamcinolone group and triamcinolone group.

• **CONCLUSION:** The clinical effects of intravitreal injection of bevacizumab and triamcinolone acetonide for DME is significant, and this method is worthy of studying and application.

• **KEYWORDS:** bevacizumab; triamcinolone acetonide; laser; diabetes; macular edema

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