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玻璃体切割术治疗复杂眼外伤的疗效及预后影响因素分析

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摘要 目的:探讨玻璃体切割术治疗复杂眼外伤的临床疗效、安全性及其预后影响因素。**方法:**选取我院收治的80例眼外伤患者,均行玻璃体切割术治疗,观察并记录患者的术前、术后6个月的最佳矫正视力(BCVA),术前、术后3个月、6个月的汉密尔顿焦虑量表(HAMA)评分,分析影响患者预后的危险因素及随访6个月期间并发症的发生情况。**结果:**患者术后BCVA比例较术前显著提高,差异具有统计学意义(P<0.05)。术前视力、眼内异物、受伤类型、手术时机均是影响患者预后的危险因素。患者术后3个月、6个月的HAMA评分明显低于术前(P<0.05)。随访6个月期间,共有71例患者眼内炎症反应,17例术后继发青光眼,6例角膜水肿。**结论:**玻璃体切割术治疗复杂眼外伤能明显改善患者视力,缓解患者焦虑情绪,患者术前视力情况及手术时机的选择是患者预后重要的影响因素。

关键词:玻璃体切割术;复杂眼外伤;视力;并发症;预后

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Efficacy and Prognostic Influencing factors of Vitrectomy in the Treatment of Complicated Ocular Trauma

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ABSTRACT Objective: To investigate the efficacy, safety, prognostic influencing factors of vitrectomy in the treatment of the complicated ocular trauma. **Methods:** 80 patients with complicated ocular trauma were selected and given vitrectomy. The efficacy of vitrectomy in the treatment of the complicated ocular trauma was analyzed by best corrected visual acuity (BCVA) before operation, at 6 months after operation, hamilton anxiety scale (HAMA) value before operation, at 3 and 6 months after operation, the risk factors influencing the prognosis and complications during 6 months follow-up. **Results:** The BCVA was significantly improved after operation (P<0.05). The preoperative visual acuity, intraocular foreign body, type of injury and operative time were the risk factor of prognosis. The preoperative HAMA score was 19.6± 4.1, the HAMA score was 11.3± 2.5 at 3 months after operation and 7.6± 1.1 at 6 months after operation. The HAMA score at 3 and 6 months after operation were higher(P<0.05). During 6 months' follow-up, 71 cases of intraocular inflammation, 17 cases of secondary glaucoma and 6 cases of corneal edema were observed. **Conclusion:** Vitrectomy was effective in the treatment of complicated ocular trauma, which could improve the patients' vision, relieve the anxiety of patients. Preoperative visual acuity and operation opportunity were important prognostic factors for the patients with complicated ocular trauma.

Key words: Vitrectomy; Complicated ocular trauma; Vision; Complication; Prognosis

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眼外伤为眼科较为常见的一种疾病,复杂眼外伤无明确定义,多指眼内多个结构的破坏和多种眼内组织损伤[1,2],若不及时就诊进行治疗,将导致牵引性视网膜脱离,造成患者视力丧失。此外,患者在遭受眼外伤后,不但视力受损,外观也受到不同程度的影响,容易产生焦虑情绪[3,4]。保守治疗难以恢复患者视力,需进行手术。随着眼科治疗技术的不断发展,特别是玻璃体切割术的开展,为患者提高视力提供了新的希望[4]。为了探究玻璃体切割术对复杂眼外伤的疗效及影响手术效果的因素,本研究回顾性分析了80例来我院就诊的眼外伤患者的临床资料,现报道如下:

1 资料与方法

1.1 一般资料

选取80例眼外伤患者,年限:2011年5月~2015年5月,纳入标准:① 视力受损严重,入院后视力<0.1;② 闭合性眼外伤伴有严重的玻璃体积血;③ 开放性眼外伤伴眼内炎、脉络膜出血或破裂;④ 经本院伦理委员会同意,术前每位患者均签署书面知情同意书。排除标准:非机械性损伤引发的眼外伤。其中,男41例,女26例,平均年龄(36.9± 18.3)岁,外伤至玻璃体切割术时间3-68 d,平均(32.4± 16.5) d,眼外伤类型:闭合性眼外伤31例,开放性眼外伤49例,开放性眼外伤中眼异物伤16例。致伤原因:穿通伤29例,钝挫伤39例,爆竹伤12例。

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1.2 手术方法及处理

术前行眼部 B 超检查、眼压检查、视力检查及间接眼底镜检查，了解眼部受伤情况，借助显微镜，对眼部受损者创口处先行清创处理，后行缝合眼球壁伤口。眼内有磁性异物可以用磁棒通过磁力吸出，非磁性异物直视下进行分离操作。为了避免异物去除时视网膜脱离，去除前须做视网膜光凝。所有患者均采用睫状体平坦部三通道闭合式玻璃体切割术操作。晶状体脱位者行晶状体切割，化脓性眼内炎者，先行玻璃体纤维条索以及脓团等混浊物切除。视网膜脱离者先行巩膜环扎术，后行玻璃体切割术，剥离视网膜前及下增殖膜，松懈视网膜后，采用惰性气体、硅油填充、眼内电凝治疗。混浊、变性或增生的玻璃体切除需彻底，以免引起眼内炎症。

1.3 观察指标

(1)最佳矫正视力 (BCVA)：采用国际标准视力表对患者术前、术后 6 个月的 BCVA 进行测量[5]；(2)影响预后的危险因素，以术后视力提高 2 行及 2 行以上为治愈，观察年龄，手术时机，术前视力情况，眼内异物，视网膜脱离，眼外伤类型对玻璃体切割术手术效果的影响；(3) 焦虑情况：采用汉密尔顿焦虑量表(HAMA)评价患者术前，术后 3 个月，术后 6 个月的焦虑情况；(4)术后并发症：术后随访 6 个月，观察并记录并发症发生情况。

1.4 统计学分析

所有数据采用 SPSS 17.0 软件进行分析，计量资料以 $\bar{x}\pm s$ 表示，采用 t 检验，计数资料以%表示，采用 x^2 检验，以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 患者术前术后 BCVA 情况

术后 6 个月，患者术前术后 BCVA 构成比相比差异具有统计学意义(P<0.05)，患者术后 BCVA 比例较术前显著提高，见表 1。

表 1 患者术前术后最佳矫正视力情况的比较(n=80)

Table 1 Comparison of the percentage of BCVA in patients before and after operation

	≤ 0.02	0.03-0.04	0.05-0.1	>0.1
Before operation	44	26	10	0
6 months after operation	14	9	35	22

2.2 影响玻璃体切割术治疗的复杂眼外伤患者预后的因素

如表 2 所示，术前视力、眼内异物、受伤类型、手术时机均是影响玻璃体切割术治疗的复杂眼外伤患者预后的危险因素。术前视力≥ 0.03 时，术后视力改善明显(P<0.05)；眼内有异物存在时，手术操作困难，手术效果下降(P<0.05)；当眼外伤为闭合性时，手术效果好于开放性眼外伤(P<0.05)。选择眼外伤 7-14 d 进行手术，手术效果最理想，患者视力改善明显(P<0.05)。

表 2 影响玻璃体切割术治疗的复杂眼外伤患者预后的危险因素 (n=80)

Table 2 Risk factors affecting the prognosis of ocular trauma treated by Vitrectomy(n=80)

Risk factors		n	Cure	x^2	P
Preoperative visual acuity	<0.03	44	31(70.4)	9.826	0.002
	≥ 0.03	36	35(97.2)		
Age	<18	23	17(73.9)	1.649	0.199
	≥ 18	57	49(86.0)		
Intraocular foreign body	Yes	16	10(62.5)	5.541	0.019
	No	64	56(87.5)		
Retinal detachment	Yes	60	48(80.0)	1.039	0.308
	No	20	18(90.0)		
Type of injury	Closed ocular trauma	31	29(93.5)	4.279	0.039
	Open ocular trauma	49	37(75.5)		
Operative opportunity	Within 7 d after injury	11	7(63.6)	6.356	0.042
	Within 7-14 d after injury	46	42(91.3)		
	>14 d after injury	23	17(73.9)		

2.3 患者术前术后焦虑情况的比较

患者术前 HAMA 评分为 19.6± 4.1，术后 3 个月为 11.3± 2.5，术后 6 个月 7.6± 1.1。术后 3 个月、6 个月的 HAMA 评分明显低于术前(P<0.05)。

2.4 患者术后并发症的发生情况

术后随访 6 个月，随访期间有 71 例患者眼内炎症反应，给予喹诺酮类滴眼液予以治疗。17 例术后继发青光眼，给予毛果芸香碱治疗，降低眼内压。6 例角膜水肿，给予皮质类固醇药物治疗 1-2 周后康复。

3 讨论

眼外伤属临床较为常见的一种致盲性眼病，多由机械性损伤引起，常伴有眼内容物脱出、视网膜、脉络膜脱离等，临床最明显的表现为患者视力严重减退或单眼失明[6,7]。眼外伤程度较严重者玻璃体积血会造成屈光间质混浊，出血机化牵拉视网膜，导致视网膜脱离，造成眼球萎缩，最终将会导致视力丧失。因此，及时诊断与正确的治疗对挽救患者视功能具有重要的临床意义[8-9]。

玻璃体切割术的开展打破了很多以前不能治疗的手术禁区，为复杂眼外伤病人的复明带来了希望[10,11]。眼球受损后，前期治疗中应尽量避免摘除眼球，导致视力丧失[12,13]。选择一期清创缝合术可为后续玻璃体切割术的开展创造有利条件。视网膜和视神经是眼球最主要的功能部位，坏死后不能修复，因此他们的直接创伤或并发症会导致视力永久丧失[14,16]。而玻璃体切割术可以较好地处理机械性损伤引起的眼部损伤和并发症，能够切除玻璃体内积血和增生组织，去除眼内异物，进而改善患者眼外伤后视力[17-19]。

高旭辉[20]等采用玻璃体切割术治疗复杂眼外伤，术前视力 0.06-0.1 的人数为 3 人，术后提高到 13 人，术前视力 >0.1 的人数为 0 人，术后提高至 13 人。本研究中，由于眼部外伤，术前患者视力≤ 0.02 的患者人数居多，经玻璃体切割术治疗，术后 6 个月，患者视力 >0.1 的人数由术前 0 人提高到术后 22 人，视力 0.05-0.1 的人数由术前 10 人提高到术后 35 人，与高旭辉等研究相仿。这说明玻璃体切割术能提高复杂眼外伤患者的视力，然而眼外伤病情复杂，手术效果与多种因素相关。研究结果显示术前视力、眼内异物、受伤类型、手术时机均是影响预后的危险因素。术前视力≥ 0.03 时，术后视力改善明显，提示患者术前视力好往往有较好的预后。眼内有异物存在时，术前需评估异物的大小、形状、性质，选择合适的手术切口及异物镊，在取出异物时，需避免损伤与视功能恢复相关的眼组织。对磁性异物，可采用磁铁吸引取出，虽然方法简便，但容易引起较多并发症，如玻璃体出血、眼内炎等。非磁性异物、纤维包裹性异物及球壁异物，手术操作难度大，在手术取出时注意保持异物长轴与切口垂直，以免损伤玻璃体。当眼外伤为闭合性时，手术效果好于开放性眼外伤，说明玻璃体切割术对闭合性眼外伤具有较好的治疗效果，手术时只需将玻璃体内血液及相关的生长因子有效切除，就能防止视网膜脱离，避免患者由于眼外伤而导致失明。手术时机方面，选择眼外伤 7-14 d 进行手术，手术效果最理想，患者视力改善明显。手术 7d 以内进行手术治疗能切除破裂的晶状体、血液和损伤的玻璃体，但术后出血风险较高，影响预后效果。眼外伤 7-14 d 后，玻璃体多已发生后脱离，便于玻璃体切割术进行治疗。

玻璃体切割术前，患者由于眼部受伤导致视力严重下降，视物模糊，甚至暂时性失明，患者由于担心眼睛失明而产生较为严重的焦虑情绪。此外，眼部受损在一定程度上影响了患者的外观，也加重了患者的焦虑情绪。经手术之后，视力逐渐恢复，患者焦虑情绪明显得到缓解。术后随访 6 个月期间，患者出现眼内炎症，继发青光眼，角膜水肿等并发症，均给予了针对性治疗得以恢复。

综上所述，玻璃体切割术治疗复杂眼外伤能明显改善患者视力，缓解患者焦虑情绪，需注意的是患者术前视力情况及手术时机的选择对手术效果影响较大。

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（下转第 3977 页）

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（上接第 3931 页）

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