

# 青光眼视野损害的身心交互特征

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## 摘要

进行性视野缩小是青光眼的主要视功能损害特征。偏执人格及焦虑/抑郁特征则贯穿了发病过程及病程进展。而焦虑/抑郁为主要特征的青光眼患者情绪/心理障碍,对残留视野的范围和视敏度均产生负性影响。身心交互作用的结果使青光眼视功能损害的速度和程度都发生特征性变化。“心因性误差”或称“功能性误差”,导致视功能病理损害的误判。关注青光眼患者情绪障碍与视野损害的交互作用,促进了对青光眼病程身心联合干预策略的发展。

**关键词:**情绪/心理障碍;焦虑/抑郁;视野;身心交互;青光眼

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## Emotional and physical disorder interaction on glaucoma patients

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## Abstract

• Progressive reduction of visual field is the main feature in glaucoma patients. The paranoid personality and anxiety/depression characteristics of glaucoma patients run through the pathogenesis and progression of the

disease. The correlation between different visual fields and various cognitive components may lead to cognitive changes or different degrees of emotional disorders in the process of visual field impairment, while the emotional/psychological disorders in glaucoma patients with anxiety/depression as the main characteristics have negative effects on the range of peripheral vision and visual acuity. As a result of the interaction between body and mind, the speed and degree of visual impairment of glaucoma have characteristic changes. "Psychogenic error" or "functional error" will lead to the misjudgment of pathological damage of visual function. Attention to the interaction between mood disorders and visual field impairment in glaucoma patients has promoted the development of combined intervention strategies of body and mind on the course of glaucoma.

• **KEYWORDS:** emotion/psychological barriers; anxiety/depression; visual field; mind and body interaction; glaucoma

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## 0 引言

青光眼患者视功能与情绪障碍表现为明确身心交互作用<sup>[1]</sup>。临床诊疗策略不仅救治视功能损害,患者的偏执人格及焦虑/抑郁特征亦需积极干预。其身心交互作用表现可能先于视觉生理功能障碍出现,早期症状及筛查成为青光眼诊治热点<sup>[2]</sup>,患者人格特质、焦虑状态、抑郁特征等研究<sup>[3-4]</sup>,成为重要研究靶点。

### 1 视野损害启动身心交互过程的情绪特征

#### 1.1 视野的情绪相关研究

**1.1.1 半侧视野情绪特征** 视野与情绪相关性研究由来已久<sup>[5]</sup>,在大脑皮层不同半球,枕叶视觉皮质投射鼻颞侧不同半侧视野的非母语情绪词汇的识别水平差异<sup>[6-7]</sup>表现右侧半球为负向语言的正效价区域。虽然早期研究认为左侧视野(右侧视皮质)对欢乐识别水平高于右侧视野<sup>[8]</sup>,较早视野相关性情绪功能研究则认为左侧视野呈现的面孔情绪更容易判读为悲伤,而欢乐的情绪判读没有明显的大脑半球优势<sup>[9]</sup>。

**1.1.2 象限性视野认知特征** 视觉社会功能的重要内容:面孔识别过程中,颞上象限表情分辨与初级情绪密切相关<sup>[10]</sup>。青光眼早期视野缺损位于颞侧及上方,可能与社会功能相关。人脸识别、情感分离的过程完成时间及速率呈现显著差异,在颞上方视野的呈现可能通过不同的神经通路进行传导,表现为早期的情感分离<sup>[11]</sup>。人类社会功能要求对社交对象的情绪判断损害导致社会能力下降或受损,青光眼患者情绪障碍的发生可能与此相关。

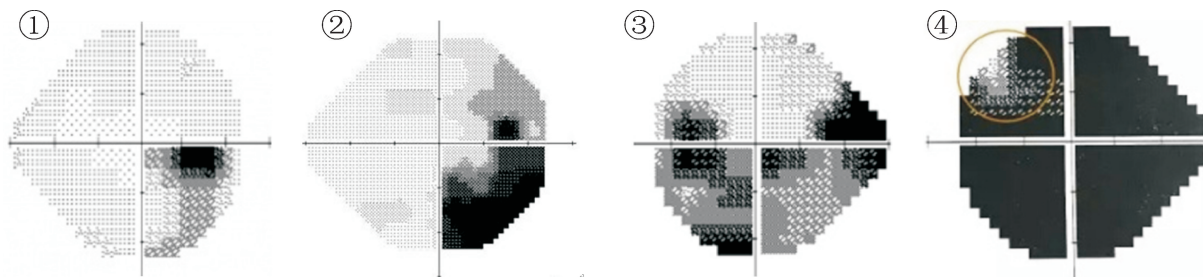


图1 青光眼早期视野表现。 图2 青光眼进行期视野损害。 图3 青光眼晚期视野表现。 图4 残余性青光眼,盲。

**1.1.3 视野损害与情绪障碍的相关性** 右侧大脑活动表现为双眼左侧视野功能,情绪障碍导致右侧大脑皮质功能受损时,半侧视野功能下降就成为主要体征<sup>[12]</sup>。远距视野缺损及视野对比度下降,诱发显见焦虑<sup>[13]</sup>,视觉靶点注视过程中出现显著视野暗点、视觉对比度下降从而发生视觉偏差,视野相对暗区时,叠加的焦虑可能导致无器质性损害的视野缺损加重<sup>[14-15]</sup>,这种特征在双相抑郁患者表现更加显著<sup>[16]</sup>。单纯抑郁症状和抑郁情绪的视觉特征主要表现为视敏度下降<sup>[17]</sup>,视野无显著改变。多巴胺因素参与时合并抑郁症状的主要体征表现为左侧视野较为明显的损害<sup>[18]</sup>。对抑郁症患者进行经颅刺激后,抑郁症患者空间识别敏感性降低改善,视野损害趋于修复。中心视野损害及全视野视敏度下降,在老年人均可导致抑郁水平显著提高,焦虑与抑郁共患病率明显高于单病种患者<sup>[19]</sup>,年龄、性别、婚姻状况及社会支持水平也具有相关性<sup>[20]</sup>。

**1.2 青光眼视野损害的身心交互作用** 青光眼早期,视野的旁中心暗点及生理盲点扩大(图1),患者眼压阶梯型上升及昼夜眼压波动幅度增大可能是这个阶段情绪障碍的相关因素。进展期或急性闭角型青光眼反复发作后,患者视野环形暗区、周边视野进行性缩小(图2),头痛眼胀不适或间歇视物模糊。与偏执人格相关。当周边视野明显缩小(图3),主观或客观视觉相关生活质量显著下降。此阶段患者年龄与抑郁发生率正相关,焦虑与年龄呈现弱负相关。残余期青光眼(图4),达到生理盲标准。患者视功能低下,生活能力障碍。视觉敏感期发生的绝对期青光眼,患者成年后自闭症发生几率显著高于对照组。

## 2 情绪/心理障碍的生理/病理表现

### 2.1 焦虑情绪对被测眼压的影响

**2.1.1 焦虑的眼压测量干扰特点** 从经典诊断标准“导致视野损害的高眼压”而言,眼压测量准确性尤其重要。白大衣性高眼压(white coat ocular hypertension, WCOH)主要表现为诊室高眼压,患者其他生活范围眼压不表现阳性体征。正常被试者在模拟临床环境中,其焦虑状态和焦虑特质的水平与高眼压水平呈现显著高相关<sup>[21]</sup>，“白大褂”导致测量过程中交感神经相对兴奋,副交感神经活动抑制,使眼压水平同时升高。因此,基础眼压测量中,焦虑水平及心率水平评估能明确诊断,避免误诊。临床实践中,专科医师应用24h眼压检测等手段进行系统误差校对,提高眼压测量准确率。

**2.1.2 焦虑/抑郁水平与视野检查相关性** 开角型青光患者的神经质倾向及低合作水平和低责任感、相对内向型人格特征<sup>[22]</sup>,使得其在需要听从指令、主观积极配合的视野检查中,首次检查可信度(reliability factor, RF)显著低于正常对照组。特质焦虑和测试前焦虑同时降低了视野检查的可信度,重复测量反而使可信度继续下降。随着医

患关系信任感加强,RF与对照组无显著差异。与焦虑患者相比,抑郁水平逐渐提高的过程中,患者视野检查的可信度水平呈双相表现,中度抑郁患者不仅认知功能损害明显,其视野检查报告提示非假阳性周边视野损害显著<sup>[23]</sup>,而这部分视野损害可能是由于Top-down通路下的视觉细胞功能损害,而非神经节细胞功能障碍导致。

### 2.2 焦虑/抑郁水平对治疗过程中的主诊医师依从性影响

治疗依从性方面,医疗行为对患者的依从性水平无显著影响,每月自动电话提醒,重复的患者教育,医生接触频率均不能提高患者药物治疗依从率<sup>[24]</sup>。抑郁、疑病人格类型患者的长期药物治疗及反复治疗依从性监测,导致患者焦虑水平提高。形成阶梯型、循环上升的眼压损害。老年( $\geq 70$ 岁)患者显著认知损害,伴随抑郁高发<sup>[25]</sup>,治疗依从性显著低于其他患者。医院焦虑量表及抑郁量表提示此阶段患者情绪障碍症状显著加重<sup>[26]</sup>,患者对医师治疗依从性降低。

**2.3 焦虑/抑郁水平与治疗转归及疗效评价的相关性** 开角型青光眼焦虑/抑郁水平与治疗过程及药物种类均无相关<sup>[27]</sup>。药物治疗过程中,情绪障碍的药物相关性越低,越有益于临床方案制定。在治疗依从性逐渐下降的过程中,患者对疗效的负评价水平逐渐升高,形成恶性循环。焦虑/抑郁程度的逐渐加深,对于病情进展起到推波助澜的影响,而同时相伴的治疗依从性下降,使得疗效越来越差。心理护理及情绪障碍干预非常重要。

**2.4 视野缺损水平的焦虑相关性** 视觉相关生活质量量表(vision related quality of life, Vr-QoL)从人际焦虑,主观症状,偏执以及周边视野缺损水平判断,至少78%青光眼患者有中等程度焦虑,尤其是量表中“当前的周边视野缺损水平”与“目前焦虑状态”相关指标分析中发现:二者是所有指标中相关水平最高的部分<sup>[28]</sup>。视觉水平处于相对稳定状态后,病程延续不造成进一步偏执进展和焦虑水平提高。提示治疗策略中焦虑干预的必要性。

## 3 身心交互作用二者的时序关系

焦虑/抑郁表现是视野缺损水平的因还是果?由于焦虑导致了青光眼的易感性还是由于青光眼发病引起视野损害,继发视觉性焦虑?或者,情绪障碍表现为特质焦虑还是状态焦虑?

**3.1 病理性视野缺损的焦虑特征** 青光患者的避免伤害(harm-avoidance, HA)和自我导向(self-directed-ness, SD)得分显著高于正常对照组,提示更加敏感的个性特征<sup>[29]</sup>。就诊细节和医师应答策略,可能成为患者焦虑的起点。患者新奇需求(novelty seeking, NS)得分较低显示偏执人格。社会能力降低是视野和心理能量损害的重要指标。

### 3.1.1 焦虑,主观症状及视觉生活质量 状态焦虑诱因型

生活压力事件可能导致周边视野缺损,或者至少导致了部分性周边视功能下降<sup>[30]</sup>,体育运动降低了生活应激事件导致的外周视力下降。青光眼患者对自身社会功能期许提高,则自我报告的治疗依从性显著低于客观测量的治疗依从性,客观测量的患者治疗依从性水平与抑郁无显著相关<sup>[31]</sup>,仅仅提示抑郁症患者的治疗依从性具有低于非抑郁患者趋势。患者如何报告他们的视觉特异性(health related quality of life, HRQoL)与人格特质有关,自我报告的治疗依从性则与社会期许有关<sup>[32]</sup>,客观测量显示人格特征与治疗依从性不相关。相对于焦虑而言,青光眼患者抑郁水平较低,在视力降低、视野受损、 $\beta$ 受体阻滞剂等因素存在下,患者的抑郁症状依旧表现为特质性焦虑而非状态性焦虑<sup>[33]</sup>,老年 POAG 视野显著损害,其抑郁水平高于青年对照组,但是年龄可能是其主要协变量<sup>[34]</sup>,患者年龄大于 70 岁时,抑郁的视野缺损正相关表现高于焦虑。

**3.1.2 焦虑和/或抑郁水平的人口学特征及视野相关性特征** 相对于抑郁而言,视野损害过程中,焦虑更多发生于年龄较轻个体,随着年龄增大,青光眼导致视野的损害而容易引发抑郁发生<sup>[35]</sup>。患者偏执人格决定了焦虑表现显著高于抑郁状态。青光眼发病率与年龄正相关,与抑郁水平无显著正相关。因此,年龄为协变量之一,与老年女性的发病率相关。处于失明恐惧导致过度研判目前症状,使青光眼确诊事件导致患者抑郁分数很高<sup>[36]</sup>,显著超出视野损害相匹配的抑郁水平。焦虑/抑郁是青光眼发病过程的主要情绪障碍,前者与患者年龄负相关,后者则反之。

### 3.2 焦虑/抑郁启动视野损害的身心交互作用的相关结局

青光眼的焦虑特征表现为典型的情绪障碍模式,焦虑状态与发病年龄无显著相关性<sup>[37]</sup>。由于情绪障碍特征在先天性青光眼患者及继发性青光眼患者中的表现均不明显。青光眼患者具有特质性焦虑,则有可能是焦虑参与导致了青光眼发病过程,长期的交感神经兴奋继发高眼压,自我视觉水平消极评价患者<sup>[38]</sup>,其神经损害及视野缺损程度显著升高。

**3.2.1 慢性生活事件的高眼压相关研究** 与癌症、风湿性关节炎、系统性硬化病、系统性红斑狼疮等慢性患者相比,青光眼患者症状自评量表得分是唯一显著身体健康相关变量<sup>[39]</sup>。青光眼患者主观 HRQoL 得分与眼压水平呈现显著正相关。老年青光眼患者的年龄相关性认知功能障碍对治疗依从性的影响主要表现为遗忘及愧疚,自我评价水平逐渐降低。由于信息遗失及认知障碍阻碍了医生信息交流,导致治疗依从性被动下降。

**3.2.2 应激事件对患者的焦虑水平及眼压的影响** 常规手术可导致应激事件状态焦虑<sup>[40]</sup>。青光眼患者术前通常有药物治疗逐渐失效病程。作为一种应激事件的手术知情过程,患者状态焦虑并未超出青光眼疾病引起的特质焦虑<sup>[41]</sup>,其对于滤过手术(小梁切除术或深层巩膜切除术)的焦虑虽然显著高于常规手术平均值,其源于青光眼而非手术本身。对手术的事件应激过程,源于手术不适感及手术室环境过度解读,可能术中高眼压,甚至提高了恶性青光眼发生几率<sup>[42]</sup>。患者特质焦虑基础上,状态焦虑水平更高。药物治疗也证实了这一点<sup>[43]</sup>。术前抗焦虑治疗可降低手术基础眼压。

## 4 小结

焦虑/抑郁是青光眼患者情绪障碍的主要表现。焦虑/抑郁水平不仅影响临床诊断过程,对于药物及手术治

疗依从性,治疗预后的主观评估,都有深远影响。药源性眼表损伤及慢性视野损害,导致患者状态性焦虑/抑郁。焦虑水平与年龄呈负相关,抑郁水平与年龄呈正相关,70 岁以上老年青光眼患者尤其显著。治疗过程对抑郁/焦虑情绪的干预意义重大。特质性焦虑患者视野损害同时伴随认知能力下降,焦虑成为临床症状出现的重要诱因。情绪障碍是发病诱因和病情进展的主要因素。抗焦虑/抑郁的药物治疗,能够缓解青光眼病程,改善主观视觉质量。

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