

· 综 述 ·

眼部疾病与焦虑相关性研究进展

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【摘要】 焦虑症是一种常见的情绪障碍。眼部疾病引发的眼部疼痛、不适及不可逆转的视力丧失, 导致患者生活质量下降, 出现焦虑、抑郁等心理健康问题。研究表明, 多种眼部疾病患者常伴有焦虑症状, 其焦虑症患病率显著高于普通人群。这种关联是双向的: 一方面, 视力下降、外观改变、经济负担及生活质量降低等眼病相关因素可诱发或加重焦虑; 另一方面, 焦虑情绪也可通过影响神经递质、自主神经系统及下丘脑-垂体-肾上腺轴等功能, 加剧某些眼病(如干眼、假性近视、青光眼)的发生和发展。眼部病情的缓解, 不仅需要针对疾病本身开展积极治疗, 还需要患者保持健康的心理状态。本文就干眼、青光眼、糖尿病性视网膜病变、年龄相关性黄斑变性等常见眼病与焦虑的关系进行综述, 以期更好地阐明二者间的相互影响, 为临床的眼部疾病治疗提供联合心理治疗指导, 让眼科医师认识到心理健康在疾病治疗中的重要性。

【关键词】 焦虑; 葡萄膜炎; 干眼; 糖尿病性视网膜病变; 年龄相关性黄斑变性; 假性近视; 眼外伤; 青光眼; 视网膜色素变性

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Research progress on the correlation between ocular diseases and anxiety disorders

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【Abstract】 Anxiety disorder is a common emotional disorder. Ophthalmic diseases, which can cause ocular pain, discomfort, and irreversible visual impairment, not only lead to a deterioration in patients' quality of life but also give rise to mental health issues, including anxiety and depression. Numerous studies have indicated that a substantial number of patients with eye diseases frequently exhibit anxiety symptoms, and the prevalence rate is notably higher compared to that of the general population. This relationship is bidirectional. On the one hand, factors associated with eye diseases, such as vision loss, changes in appearance, economic burden, and reduced quality of life, can trigger or exacerbate anxiety. On the other hand, anxiety can accelerate the onset and progression of certain eye diseases, such as dry eye, pseudo-myopia and glaucoma by influencing neurotransmitter function, the autonomic nervous system, and the hypothalamus-pituitary-adrenal axis. The alleviation of eye conditions necessitates not only active treatment of the disease itself, but also maintaining a healthy psychological state. This review reviews the reciprocal relationship between various eye diseases, including dry eye, glaucoma, diabetic retinopathy, and age-related macular degeneration, and anxiety to more clearly elucidate their mutual influence, provide guidance for integrated psychological treatment in the clinical management of eye diseases and raise ophthalmologists' awareness of the significance of mental health in disease treatment.

【Key words】 Anxiety; Uveitis; Dry eye; Diabetic retinopathy; Age-related macular degeneration; Pseudomyopia; Eye trauma; Glaucoma; Retinitis pigmentosa

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焦虑症是一种常见的心理健康问题^[1]。临床上常用焦虑量表定量评估患者焦虑症状及程度。焦虑评估量表主要包括医院焦虑评估表、焦虑自评量表等多种类型^[2]。眼部疾病常伴有视力下降、眼部不适感, 导致患者生活质量下降, 同时会出现焦虑、抑郁等心理障碍^[3]。研究显示, 眼病患者焦虑的患病率

是对照组的 2 倍^[4]。不良心理健康状况会对患者眼部病情和全身健康产生负面影响。因此, 及时发现眼病患者的心理健康异常, 配合多学科诊治, 有助于改善预后。本文对各种眼部疾病与焦虑的相互关系进行综述, 并对其中涉及的相关病理生理机制及临床治疗干预策略进行探讨。

1 眼病患者焦虑的产生

焦虑是在面对预期威胁或潜在威胁时引发的适应性情绪反应,但是过度和不适当的焦虑会成为一种疾病。

眼部疾病常伴随着焦虑、抑郁等心理障碍的症状。眼部疾病可导致渐进性、不可逆的视力下降;而长期的视力受损导致患者生活质量下降,出现应对能力不足甚至绝望感,最终可能诱发焦虑症状^[4]。同时,部分眼病患者如眼外伤患者、甲状腺相关眼病患者可伴有眼部外观的改变,容貌焦虑可能对患者的情绪健康产生较大的影响^[5]。社会经济方面,年龄相关性黄斑变性(age-related macular degeneration, AMD)、糖尿病性视网膜病变等患者病程迁延、难以根治,需反复手术,手术及药物治疗费用高昂,且因缺乏社会支持,患者的心理压力显著增加,进而出现焦虑症状^[6-7]。部分眼部疾病的产生与焦虑相关,如焦虑导致的眼表水液分泌减少导致干眼的产生、焦虑导致的眼肌痉挛引起假性近视等^[8]。而且焦虑情绪可能诱发青光眼的发作,从而增加手术概率。因此焦虑与眼部疾病之间可能存在相互作用。

2 各种眼部疾病与焦虑的相关性

2.1 干眼与焦虑

干眼是世界范围内常见的眼病,患者常出现异物感、烧灼感等眼部不适症状。干眼患者的焦虑患病率可达 39%^[9]。干眼患者焦虑的影响因素有年龄、视力相关生活质量、睡眠障碍、教育程度、病程长度、主观症状的严重程度等^[10]。干眼患者的焦虑主要来自于三大方面:(1)医疗服务方面 临床医师关注度不足,干眼虽然容易诊断但是治愈困难,患者往往面临长期困扰;(2)日常生活 患者生活满意度和幸福感下降、生活和工作模式被迫调整;(3)社会方面 干眼疾病可能导致患者自觉眼痛明显,产生焦虑症状的患者社会互动频次降低^[11-12]。

干眼患者多存在健康焦虑,对身体不适的敏感度增加,患者自诉的主观症状往往比客观体征更严重^[12-13]。Mecum 等^[14]通过切除小鼠的泪腺构建中重度干眼模型,发现雌性和雄性小鼠均出现焦虑样症状,且雌性小鼠更容易表现出焦虑样症状来应对泪液缺乏。干眼患者经过有效的局部治疗后焦虑症状有所改善^[15]。

Luo 等^[16-17]利用磁共振检测手段研究证实干眼患者与正常对照组间部分脑白质区域的弥散张量成像和神经突定向弥散与密度成像值差异显著,且大脑白质微结构的变化与焦虑和抑郁相关。干眼患者脑部磁共振成像形态学分析结果显示焦虑和抑郁评分与豆状核核基体素的形态测量值呈负相关,颞上回、内侧和旁扣带脑回的基体素的形态测量值与焦虑评分呈正相关^[18]。干眼患者焦虑评分与双侧额中回,右侧额中回、右侧额下回脑部磁分数低频振幅的变化显著相关^[19]。大脑的局部变化可能是干眼患者心境障碍的生理基础。

焦虑患者使用抗焦虑药物治疗可能会加重干眼^[20]。血清素再摄取抑制剂作为典型的抗焦虑药物,可阻断结膜杯状细胞表面胆碱能 M 受体,导致泪液分泌不足,或者激活 ERK1/2 信

号通路,导致泪液渗透压增高和角膜上皮细胞脱落,细胞间紧密连接破坏,细胞肿胀裂解,进而引起眼表损伤^[21-22]。

改善干眼患者的眼干涩、眼刺痛感等不适症状不仅有助于提升眼部舒适度,还能有效缓解由此引发的焦虑情绪。因此临床应积极探索有效的干眼治疗方案,通过生理与心理的双重改善,能够帮助患者重建积极心态,形成良性循环,从而进一步促进整体康复进程。

2.2 假性近视与焦虑

假性近视被定义为过度兴奋或睫状肌痉挛引发的过度调节,导致远点明显前移的屈光状态。其主要症状是视物模糊、畏光、眼痛等,常见的病因有头部创伤以及焦虑症和人格障碍等精神性疾病^[23]。焦虑引起假性近视是由于身体的自主神经活动增强、神经递质(肾上腺素、多巴胺)水平变化导致睫状肌痉挛引起假性近视^[24]。

Kara 等^[8]对 21 例确诊为假性近视的患者进行了心理相关问卷调查,其中诊断为广泛性焦虑障碍 5 例,社交焦虑障碍 1 例,该研究是对假性近视与精神疾病关系的首次探索。另有研究显示,女性患假性近视的比例较高,推测可能与女性焦虑症患病率较高有关^[25]。

Hyndman 等^[23]总结了在假性近视患者共病焦虑等精神疾病的情况下,使用舍曲林、地西泮等精神类药物可以缓解调节性痉挛^[20]。Hyndman^[23]和 Karaman^[26]等建议,对于此类患者,需采用包括精神咨询在内的多学科方法管理和治疗。

2.3 青光眼与焦虑

青光眼是世界范围内不可逆视力丧失的重要原因,急性发作时主要症状有眼痛、头痛伴有不可逆的视力下降。青光眼患者产生焦虑的风险较高^[27-29]。青光眼患者焦虑患病率达 22.92%^[4]。青光眼患者焦虑的影响因素主要有年龄、性别、家庭经济状况、职业、受教育程度及病情严重程度等^[30]。进展期青光眼伴有较大的视野缺损、慢性视力下降,患者焦虑症状更明显^[31]。青光眼患者预后的不确定性比白内障患者高,患者焦虑评分更高,且手术无法改善焦虑^[32]。青光眼与焦虑之间的关系并不简单,Zhang 等^[33]研究发现青光眼与心理健康之间的关联主要由多效性遗传变异的不同效应分布决定,而不是偶然效应。

焦虑也会增加青光眼患者发病的风险,情绪压力可引起青光眼的发作^[34-35]。急性应激事件在产生心理压力的同时,可导致眼压显著升高,是青光眼发展的危险因素;其可能的机制是由于自主神经系统对压力的反应引起肾上腺素的动态平衡受损,改变了房水的产生速率并增大了房水流出的阻力,从而引起眼压升高^[36]。急性原发性闭角性青光眼患者容易产生焦虑情绪,诱发急性发作,进行手术的概率增大^[37]。

在对高焦虑得分青光眼患者的随访研究发现,眼压峰值和视网膜神经纤维层损失率与焦虑量表得分呈明显正相关,高焦虑青光眼患者存在自主神经系统紊乱,可导致眼局部血液循环受损,这可能是焦虑引起青光视神经损伤的原因之一^[38]。新生血管性青光眼是继发性的难治性青光眼,Zhang 等^[39]对比新生血管性青光眼患者和正常对照组的脑部磁共振发现,患者右

罗兰盖、右尾状回的分值低频振幅显著降低,大脑左额叶中回、眶部的局部灰质体积显著降低,且均与焦虑评分呈明显负相关。血清神经肽 Y 浓度被证实为原发性青光眼患者焦虑和抑郁的独立预测因子^[40]。

核心建议调整体青光眼患者护理,倡导眼科医师和精神科医师之间合作解决抑郁和焦虑问题,认识到它们对治疗依从性、疾病轨迹和青光眼患者整体健康的影响^[41]。

2.4 糖尿病性视网膜病变与焦虑

糖尿病性视网膜病变是常见的糖尿病微血管并发症之一,会严重损害患者视力,降低生活质量,增加负面情绪^[42]。糖尿病性视网膜病变患者的焦虑患病率可达 31.3%^[4]。年龄、教育程度、社会地位、自理能力、糖尿病家族史、合并其他慢性疾病是糖尿病性视网膜病变患者焦虑的危险因素,社会支持是保护因素^[43-45]。

糖尿病性视网膜病变是不良心理健康的独立危险因素,同时其导致的视力下降、视野缺损、对比敏感度下降及色觉异常导致日常生活受影响^[7],其对心理健康的影响也不容忽视^[44,46]。采用抗血管内皮生长因子药物治疗糖尿病性黄斑水肿后,最佳矫正视力的改善能够减轻患者的焦虑^[47]。因此,糖尿病性视网膜病变患者的临床管理不仅包括疾病的诊断和治疗,还需纳入信息沟通和心理治疗^[48]。糖尿病性视网膜病变患者接受手术及非手术干预后,焦虑的患病率明显降低^[49]。糖尿病微血管并发症患者较高的糖化血红蛋白及血糖水平会导致焦虑水平升高^[39]。糖尿病性视网膜病变患者焦虑可能由各方面的压力如经济压力、并发慢性疾病导致的疼痛等引起,患者下丘脑-垂体-肾上腺轴和交感神经系统的激活导致焦虑情绪的产生^[50]。同时,糖尿病患者体内下丘脑-垂体-肾上腺轴的激活可能促进了视网膜病变的发生和发展^[41,51]。

2.5 AMD 与焦虑

AMD 是 60 岁以上人群视力不可逆丧失的主要原因^[52];其在导致视力丧失的同时会对患者心理健康产生负面影响,尤其在湿性 AMD 患者中更为常见^[53]。AMD 患者焦虑的患病率可达到 21.6%^[4]。患者焦虑的影响因素有年龄、性别、视力^[54],而玻璃体内药物注射次数与焦虑水平无明显相关^[55]。有研究发现,黄斑中心凹存在地图性萎缩的干性 AMD 老年患者由于视力下降限制了活动能力和独立性,焦虑发生的风险升高^[56]。

AMD 患者进行日常家务任务时会经历更多的焦虑与压力,这些焦虑主要与低视力相关^[57]。湿性 AMD 患者接受抗血管内皮生长因子注射治疗时,首次注射的恐惧、医患沟通不佳、注射疼痛感、术后不适感、视力无明显提升等均会导致患者焦虑,而焦虑是患者放弃治疗的主要原因之一,医师需充分告知患者疾病预后及注射相关信息,缓解患者焦虑情绪,以提高患者治疗配合度和积极性^[58-59]。

Shen 等^[60]对 AMD 患者进行大脑功能性核磁共振检查,发现大脑白质体积增加与灰质体积减少,患者的焦虑评分与额颞叶特定区域灰质体积减少存在相关性。Liu 等^[61]发现 AMD 患者存在异常自发脑活动,其中大脑扣带回及额上回的活动与焦虑抑郁呈负相关。以上研究为进一步探索 AMD 患者焦虑发生

相关病理机制提供了线索。

2.6 视网膜色素变性焦虑

视网膜色素变性(retinitis pigmentosa, RP)是遗传性盲的首要原因,RP 患者焦虑患病率可达 36.5%^[4]。

与正常视力的个体相比,RP 患者焦虑或抑郁状态的患病率更高^[62]。Azoulay 等^[63]发现视野缩小和视力下降与焦虑评分呈明显相关。而 Sainohira 等^[64]发现 RP 患者视觉功能与焦虑无明显相关性,而随着视力的下降,患者的抑郁状态会更加显著。

2.7 葡萄膜炎与焦虑

葡萄膜炎是伴有视力下降的眼部炎症性疾病,同时也会导致情绪障碍,患者焦虑的总患病率可达 39%^[65]。

有研究发现,白塞病伴有双眼葡萄膜炎患者视觉功能与焦虑和抑郁的发病率明显相关^[64,66]。但是并未发现葡萄膜炎儿童患者有明显的焦虑状态^[67]。葡萄膜炎患者焦虑的可靠预测因素是自觉视觉能力差和家庭低收入^[68]。

2.8 眼外伤与焦虑

眼外伤是单眼视力下降的主要原因,多发生于男性。眼外伤患者急性期会表现出明显的负面情绪,通过术前的心理干预可明显改善患者的焦虑情绪,从而提高与医护的配合度^[69]。而且眼外伤不良的远期预后及并发症也会导致患者出现心理障碍^[70]。Karaman 等^[57]在对 20 例青少年眼部外伤患者的心理调查研究中发现,15% 患者有广泛性焦虑障碍。因眼外伤或肿瘤行眼球摘除术后无眼症患者的躯体化、抑郁、焦虑和敌意水平增加^[5]。精细的护理及心理干预能显著改善眼球摘除患者的焦虑状态^[71]。目前,关于眼外伤患者心理状态的研究较匮乏。眼外伤患者视力预后存在高度不确定性,部分患者甚至面临致盲或眼球摘除等严重后果,同时可能伴有的经济压力及劳务纠纷,均能引发心理状态的改变,导致后续治疗配合度差。眼外伤患者相关的情绪障碍有待进一步探索。

3 小结与展望

眼病患者出现心理社会功能不良的可能性高,因此,预防及减缓病情发展是关键,同时减缓由情绪障碍引起的病情进展^[44]。眼部疾病患者如干眼、青光眼等慢性疾病患者容易在疾病过程中产生焦虑情绪,并且焦虑可能会导致疾病的发生,两者之间存在相互作用,可能会相互促进。因此,在慢性眼部疾病的治疗中配合心理相关治疗将有助于缓解患者的症状,减轻患者的痛苦。糖尿病性视网膜病及眼外伤导致患者严重的视力障碍,急性期的疼痛和较大的经济压力会促使其产生焦虑情绪,在诊治过程中注意配合心理疏导有助于患者遵医嘱,积极配合治疗,提高视力预后。

眼科医师在医学诊疗过程中应意识到眼部疾病和心理障碍是相互影响的,在进行临床诊疗的同时采取相应措施干预焦虑:(1)对确诊患者开展眼病相关健康宣教,缓解患者焦虑情绪,以提升患者治疗配合度。(2)对具有焦虑易感性的眼病患者进行精神评估和检测,及时调整诊疗思路和沟通方式。(3)对于确诊有情绪障碍的患者,开展多学科综合诊治,避免因

情绪障碍造成的病情加重及不良后果。(4)探索眼病患者心理健康问题的潜在病理机制以及有效心理干预方法,完善治疗模式,改善患者生理及心理健康。运动可有效缓解焦虑和抑郁情绪,并已证实有助于降低青光眼患者眼压,从而预防视网膜神经节细胞坏死引发的视力损伤^[72]。因此,应鼓励患者适当进行体育运动,该措施不仅可改善患者的情绪障碍,同时对于患者全身情况的提高有正向作用。

利益冲突 所有作者均声明不存在利益冲突

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本刊对论文中统计学方法描述的要求

研究论文如有量化测试指标时须有统计学分析的内容, 并在方法部分提供统计学方法的描述, 反应变量为单变量时请提供测量指标数据资料的性质(如计量数据资料及计数数据资料的表达方式)、多个样本计量数据资料正态分布检验方法的名称及方差齐性检验方法的名称、实(试)验设计方法及与之相匹配的统计学设计(如配对设计、成组设计、交叉设计、析因设计、正交设计等)、与统计设计相应的统计方法名称(如 t 检验、方差分析)以及检验水准。选择方差分析统计设计时应根据单因素或多因素设计选择正确的方法, 不宜简单套用单因素方差分析。反应变量为双变量时, 应根据实(试)验设计正确选择简单直线相关分析、回归分析或其他方法, 不宜简单套用直线相关分析。统计学的检验水准请提供为双侧检验或单侧检验。论文结果部分的统计学分析内容可用相应的图表表达。

统计学符号的著录执行 GB/T 3358.1—2009/ISO 3534-1: 2006《统计学词汇及符号》的有关规定, 统计学符号一律采用斜体, 如样本量用 n ; 中位数用英文斜体大写 M , 样本均数的标准误用英文小写 $\sigma_{\bar{x}}$, t 检验用英文小写 t , F 检验用英文大写 F , 卡方检验用英文小写 χ^2 , 相关系数用英文小写 r , 秩相关分析相关系数用 r_s , 确定系数用 R^2 , 自由度用英文小写 ν ; 概率用英文大写 P ; 检验水准用 α 。统计结果的解释和表达采用对比组或比较对象之间差异有统计学意义的描述方法, 而不用对比组之间差异具有显著性(或非显著性)的描述。论文的统计学分析结果提倡提供统计学检验量值和 P 值的具体数据, 如不能提供 P 值的具体数据时, 必须提供统计学检验量值如 χ^2 值、 t 值、 F 值等。当涉及总体参数(如总体均数、总体率等)时, 在给出显著性检验结果的同时, 请给出 95% 可信区间 (CI)。

(本刊编辑部)

