

胃食管反流病与精神心理、自主神经功能关系的研究进展

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Relationship between gastroesophageal reflux disease and psychological factors and autonomic nervous function

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Abstract

Gastroesophageal reflux disease (GERD) is a multifactorial disease. Psychological factors play an important role in the development and progression process and the treatment of GERD. Autonomic nervous dysfunction leads to changes of the digestive tract and

high gastrointestinal sensitivity. Autonomic nerve function disorder is the intermediate link between psychological factors and gastroesophageal reflux symptoms in patients with GERD. Research on psychological factors and autonomic nervous function plays an important role in the clinical diagnosis and treatment of GERD in the future.

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Key Words: Gastroesophageal reflux disease; Psychological factors; Autonomic nervous function

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摘要

胃食管反流病(gastroesophageal reflux disease, GERD)是一种多因素引发的疾病。精神心理因素在GERD的发生发展及治疗过程中扮演了极其重要的角色, 自主神经功能的紊乱会导致胃肠道动力的变化及消化系统高敏状态, 自主神经功能紊乱是精神心理因素与GERD患者反流症状产生的中间环节。对心理因素与自主神经功能的研究对今后GERD的临床诊治工作有重要意义。

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关键词: 胃食管反流病; 精神心理因素; 自主神经功能

核心提示: 精神心理因素在胃食管反流病

背景资料

胃食管反流病(gastroesophageal reflux disease, GERD)是由多种因素造成的消化系统动力障碍性疾病。近年来研究表明, GERD的病因与发病机制除了与食管抗反流机制减弱及反流物对食管黏膜攻击作用等因素有关, 精神心理因素与自主神经功能紊乱也与此病的发生发展关系密切。

同行评议者

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■ 研究前沿

GERD与精神心理、自主神经功能关系是目前GERD方面研究热点。由于心血管和食管神经支配系统非常相似,研究者通常用心血管自主神经功能评定的方法替代测定胃肠道自主神经功能,目前评价胃肠道自主神经功能更好的方法尚在研究阶段。

(gastroesophageal reflux disease, GERD)的发生发展及治疗过程中扮演了极其重要的角色,自主神经功能的紊乱会导致胃肠道动力的变化及消化系高敏状态,自主神经功能紊乱是精神心理因素与GERD患者反流症状产生的中间环节。

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0 引言

胃食管反流病(gastroesophageal reflux disease, GERD)是由多种因素造成的消化系动力障碍性疾病^[1,2]。1980年, Heatley等^[3]研究发现, GERD患者存在迷走神经功能紊乱。近年来研究^[4-6]表明, GERD的病因与发病机制除了与食管抗反流机制减弱及反流物对食管黏膜攻击作用等因素有关, 精神心理因素与自主神经功能紊乱也与此病的发生发展关系密切^[7,8]。现将近年来该领域的研究综述如下。

1 GERD与精神心理因素的关系

国内外越来越多的研究表明, 精神心理因素在GERD的发生发展中有重要的影响作用, 而另一方面, GERD的发生发展也可诱发或加重精神心理疾患。国内学者侯艳红等^[9]采用症状自评量表(Symptom Checklist 90, SCL-90)对GERD病例组和健康对照组进行心理因素评分, 研究发现, 病例组较对照组普遍存在抑郁、焦虑、恐惧、强迫观念和人际关系敏感等异常心理, 以焦虑和抑郁更为突出。国外学者Sanna等^[10]系统地研究了GERD与精神病理学之间的相关性, 发现心理症状如情绪障碍等与GERD症状之间有着极其密切的关系。GERD的发生发展与精神心理因素之间相互联系, 相互影响。

在治疗方面, 精神心理因素也常常影响GERD患者就医治疗的效果。质子泵抑制剂(proton pump inhibitors, PPI)抑酸作用强, 可以有效地促进食管黏膜破损的GERD患者的黏膜愈合, 迅速控制GERD患者的临床症状, 是目前治疗本病的标准用药^[11], 但仍有一部分GERD患者经过标准剂量的PPI药物治疗后症状无法完全缓解。Heading等^[12]对1888例GERD患者研究发现焦虑、抑郁是GERD抑酸治疗效果欠佳

的重要危险因素, 研究显示, 部分GERD患者在常规PPI药物治疗的基础上加用一些抗焦虑抗抑郁药物, 往往可以取得更好的疗效。

近年来, GERD与精神心理因素相互作用的病理生理学基础也是国内外学者研究的热点。有学者^[13]指出, 焦虑和抑郁会降低GERD患者的内脏感觉阈值, 增强患者的内脏敏感性, 还有学者研究^[14]证明, 抑郁可以导致全消化系的转运延迟。这说明心理因素可以影响机体的胃肠道动力及内脏敏感性。基于系统的研究, 科学家们发现精神心理因素是通过免疫-神经-内分泌网络实现对胃肠动力及感觉的影响, 并建立了神经胃肠病学说(neurogastroenterology)^[15], 提出了“脑-肠轴”(brain-gut axis, BGA)^[16]和“脑-肠互动”(brain-gut interaction, BGI)^[17]的概念。“脑-肠轴”是指将胃肠道和中枢神经系统联系起来的神经-内分泌网络^[18]。而“脑-肠互动”是指机体通过神经内分泌网络的双向环路进行胃肠道功能的调节^[19]。肠神经系统(enteric nervous system, ENS)在神经元成分, 分泌的神经递质, 及独立完成神经反射的功能上与大脑有极大的相似性, 被称为“第二大脑”(the second brain)^[20], ENS通过神经递质的释放和传递把内脏与和中枢神经系统(central nervous system, CNS)联系起来。这些神经递质称为“脑-肠肽”^[21], 主要兴奋递质有5-羟色胺(5-hydroxytryptamine, 5-HT)^[22]、组胺^[23]、P物质(substance P, SP)^[24]、促肾上腺皮质激素释放因子(corticotropinreleasing factor, CRF)^[25]、降钙素基因相关肽(calcitonin gene related peptide, CGRP)^[26]等, 抑制性递质有胆囊收缩素(cholecystokinin, CCK)^[27]、一氧化氮(nitric oxide, NO)^[28]、血管活性肽(vasoactive intestinal peptide, VIP)^[29]、去甲肾上腺素(noradrenaline, NE)^[30]等。人体通过“脑-肠轴”和“脑-肠互动”实现了胃肠道疾病与精神心理因素之间的相互联系、相互影响^[31]。

2 GERD与自主神经功能的关系

目前, 胃肠道自主神经功能的评定方法尚在研究阶段。国内外研究^[32]发现, 心血管和食管的神经支配系统非常相似, 可以用心血管自主神经功能的评定方法替代, 即通过测定心率变异性判定胃肠道自主神经功能。目前, 测定心率变异性已成为一种简单的, 无创性的, 建立在窦房结水平上的评估交感-迷走神经的方

■ 相关报道

国内外研究显示, GERD患者存在自主神经功能障碍, 但有关自主神经受累的程度与反流症状的相关性报道较少。

法. 心率变异性的分析实质反映的是自主神经系统的活性及平衡协调状态^[33]. 研究者通过心电图进行频域分析, 测定高频(high frequency, HF)(0.15-0.4 Hz)和低频(low frequency, LF)(0.04-0.15 Hz)的功率评估迷走神经和交感神经活性^[34,35]. 一般LF反映交感和迷走神经的双重活性, 主要反映交感神经功能状态, HF反映迷走神经功能状态, 低、高频功率的比值反映了交感神经和迷走神经的平衡状态^[36]. 研究^[37,38]发现, GERD患者存在心率变异性(heart rate variability, HRV)异常, 表明自主神经处于失衡状态, 主要表现为迷走神经活性显著降低, 交感神经活性增高.

Punkkinen等^[39]研究发现, 自主神经功能病变会影响消化系, 引起食管运动障碍. 消化系统器官受神经内分泌的调节, 高级神经中枢通过交感神经和副交感神经组成自主神经系统, 调节各系统的正常活动^[40]. 正常生理状态下, 交感神经与迷走神经处于动态平衡, 可以应对机体的各种生理需要^[41]. 在应激状态或情绪变化时平衡受到破坏, 自主神经系统的活动规律受到干扰, 受其神经调节的躯体各系统功能发生紊乱, 从而导致出现相应的症状. 有学者研究发现, 对GERD等胃肠功能紊乱性疾病如果加用改善自主神经功能紊乱的药物有助于改善患者胃肠道功能紊乱的症状^[42].

3 精神心理异常与自主神经功能紊乱的关系

在最近的很多情绪理论中, 自主神经系统的活性是情绪的重要影响因素^[43,44]. 研究者利用心率变异性来反映精神心理因素与自主神经功能紊乱的关系, 研究^[45-47]发现, 焦虑抑郁等精神心理因素会导致自主神经功能紊乱, 同样, 自主神经功能的异常会引起很多情绪反应. Keary等^[48]对正常受试者进行两轮演讲应激和放松后, 发现两次心理应激刺激后正常受试者LF上升、HF下降. 在两次放松后, 正常对照组HF均能恢复到基线水平. 这表明应激可以提高交感神经活动, 抑制副交感神经活动, 暂时打破自主神经系统的平衡, 但经过放松后, 自主神经可再次恢复平衡状态. Stephens等^[49]和Kop等^[50]研究发现, 不同情绪有各自特定的自主神经反应模式. 国内学者邓光辉等^[51]研究不同类型的自主神经反应模式对大学生情绪体验的影响, 发现自主神经反应模式可以通过决定内脏的活动特点对情绪体验产生影响. 研究发现不同自主

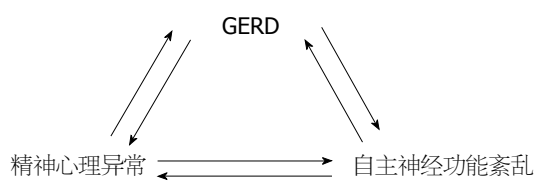


图1 胃食管反流、精神心理因素、自主神经功能紊乱之间的相互关系. GERD: 胃食管反流病.

神经反应模式的被试者在恐惧、悲伤和紧张等负性情绪体验上差异有统计学意义, 而在正性情绪体验上差异无统计学意义.

4 结论

GERD患者的胃食管反流症状, 精神心理因素, 自主神经功能之间相互影响, 互为因果, 三者关系如图1所示. 精神心理因素对GERD的发生发展及预后都存在重要影响. 自主神经功能紊乱是心理因素与GERD患者反流症状产生的中间环节, 虽然不是唯一途径, 但对自主神经功能的研究对GERD的临床诊治工作有重要意义. 按照生物-心理-社会医学模式, 在治疗患者反流症状的同时, 应关注患者的精神心理因素, 根据患者具体情况, 进行心理干预, 整体治疗.

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■创新盘点

国内外对于心理因素与GERD的相关性报道较多, 但GERD与精神心理因素相互作用的病理生理学基础, 尤其是脑肠肽对GERD的影响报道相对较少.

■应用要点

对心理因素与自主神经功能的研究对今后GERD的临床诊治工作有重要意义. 按照生物-心理-社会医学模式, 在治疗患者反流症状的同时, 应关注患者的精神心理因素, 根据患者具体情况, 进行心理干预, 整体治疗.

■ 名词解释

脑肠肽: 调节胆囊和胆管运动的激素有胃动素、胆囊收缩素和促胰液素等, 这些肽类在胃肠和神经系统双重分布, 故称为脑肠肽。脑肠肽不仅在外周广泛地调节着胃肠道的各种功能, 而且在中枢也参与对胃肠道生理活动的调节。

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同行评价

本文综述内容新颖, 是目前GERD方面研究热点, 有发表价值。

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