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文献综述 REVIEW

炎症性肠病患者服药依从性影响因素的研究进展

Rana Sami Ullah Khan, 刘晓琳, 牛俊坤, 缪应雷

背景资料
炎症性肠病(inflammatory bowel disease, IBD)是一组病因尚不明确的慢性非特异性肠道炎症性疾病, 包括溃疡性结肠炎(ulcerative colitis, UC)与克罗恩病(Crohn's disease, CD). 由于IBD病程长、反复发作的特点, 患者需要长期服药以控制症状、减少复发. 而服药依从性的高低直接影响着复发率、医疗费用和生活质量. 国内对IBD患者服药依从性的关注甚少, 本文旨在回顾国内外相关研究, 对IBD患者服药依从性的影响因素进行综述.

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Factors affecting adherence to treatment in inflammatory bowel disease

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Abstract

Inflammatory bowel disease (IBD) is a group of chronic inflammatory diseases of the intestine, which includes Crohn's disease (CD) and ulcerative colitis (UC). IBD is a kind of refractory disease. Currently, drugs including 5-ASA, corticosteroids, and immunosuppressant drugs as well as biological agents are the basic treatment. The vast majority of patients need these drugs to induce and maintain remission. The choice of treatment and patients' adherence are equally important, because the disease prognosis is related to the medication adherence. Although current treatments have been greatly optimized, little attention has been paid to many factors associated with non-adherence to IBD medications in China. This article reviews the domestic and foreign research on the factors influencing IBD medication adherence, with an aim to help medical personnel identify factors that influence treatment adherence and effectively manage this refractory disease.

Key Words: Inflammatory bowel disease; Medication

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摘要

炎症性肠病(inflammatory bowel disease, IBD)是一种慢性炎症性胃肠道疾病, 包括溃疡性结肠炎(ulcerative colitis, UC)与克罗恩病(Crohn's disease, CD), 属于一种难治性疾病. 氨基水杨酸制剂、激素、免疫抑制剂和生物制剂仍然是现阶段治疗的基础, 绝大多数患者需要这些药物诱导缓解并长期用药维持缓解, 这就使得患者治疗方案的选择和服药依从性同等重要, 依从性的高低影响着疾病预后的好坏, 目前治疗方案已经得到巨大的优化, 但服药依从性较少引起人们的关注.本文综述国内外关于IBD患者服药依从性的影响因素的相关研究进展, 帮助医务人员识别影响依从性的因素以期更有效地管理患者.

关键词: 炎症性肠病; 服药依从性; 影响因素; 研究进展

核心提示: 本文主要从炎症性肠病(inflammatory bowel disease, IBD)的疾病表现、药物因素、患者自身因素、医疗费用、社会因素、医患关系等诸多方面对影响IBD患者服药依从性的因素进行综述, 以期使得临床医生加以识别并提高患者服药依从性, 从而进一步提高临床疗效, 改善IBD患者预后.

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0 引言

炎症性肠病(inflammatory bowel disease, IBD)是一种慢性复发性炎症性胃肠道疾病, 包括溃疡性结肠炎(ulcerative colitis, UC)与克罗恩病(Crohn's disease, CD). 其病情迁延反复、难以治愈, 需要长期甚至终身服药. 虽然干细胞移植、粒细胞洗脱和粪菌移植等非药物治疗已尝试运用于临床, 但以氨基水杨酸制剂、激素、免疫抑制剂和生物制剂为主的药物治疗仍为中流砥柱, 用于大多数IBD患者的诱导缓解和维持治疗. Hommel等[1]指出IBD患者服药依从率仅为16%-62%, 其他多项研究数据也表明IBD患者服药不依从率达50%-88%[2-5], 而研究发现依从性差的患者疾病复发率较规范服药者明显增高5.5倍[6], 且每年的医疗保健费用也会较规律服药者增加29%[7], 可见遵从医嘱并且规范服药在IBD患者治疗中至关重要. 疾病表现、药物因素、患者心理以及治疗花费等诸多影响服药依从性的因素在日常临床实践中往往容易被消化科医生所忽视, 并严重干扰临床疗效. 因此本文针对IBD患者服药依从性的影响因素作一综述, 旨在帮助临床医生更好地加以识别, 从而更有效地管理患者, 达到提高治疗效率、降低疾病复发率的成效.

1 服药依从性的定义及分类

患者服药依从性是指患者对医嘱的执行程度[8], 是患者遵照医嘱正规服药的表现, 实质是患者行为与医嘱的一致性[9]. 服药依从性是治疗依从性的重要组成部分, 主要包含了服药剂量准确、服药次数正确、按医生的要求定时服药、坚持长期不间断服药4个方面. 根据产生原因可以将服药不依从分为: 意识性和非意识性两类[10,11]. 非意识性的不依从表现为患者主观想要遵从医嘱治疗, 但是受客观因素限制(例如遗忘、理解力差、缺乏资金等). 然而意识性的不依从表现为患者主观决意不按医生的建议服药, 这种现象可以与患者的偏好和信念相关. 二者均普遍见于IBD患者[12-14].

2 服药依从性的影响因素

2.1 疾病方面的因素 服药依从性贯穿于IBD疾病的整个过程, 病情严重或经常复发的患者有更高的依从性, 而处于缓解期的患者依从性相对较差, 常常服用不超过70%的处方剂量[6]. 此外, 依从性不仅取决于患者疾病的严重程度, 而且随着时间的推移而改变. 类似于其他慢性疾病, 在急性加重期规范遵医嘱服药的患者当进入疾病缓解期时往往会降低其依从性, 处于缓解期的患者因缺乏临床症状而难以遵照医嘱服用相应的药物, 表现为自行停药或减少药

研发前沿
IBD患者服药依从性受疾病表现、患者自身特征、用药情况、经济花费、家庭和社会因素、医患关系的影响, 但在患者疾病知识和心理因素方面尚未有统一的结论, 有待进一步的调查研究.

相关报道
多项研究数据表明IBD患者服药不依从率高达50%-88%, 而依从性差的患者疾病复发率较规范服药者明显增高5.5倍, 并且每年的医疗保健费用也会较规范服药者增加29%, 健康相关的生活质量随之也会变得更差, 可见遵从医嘱并且规范服药在IBD患者治疗中至关重要.

创新盘点

本文以目前临床实际存在的问题为着眼点, 对临床发现相关影响IBD患者服药依从性的因素提供思路, 并为开展依从性相关研究提供借鉴.

量、忘记服药或仅在出现临床症状时服药等一系列不规范服药的行为[15].

2.2 药物方面的因素

2.2.1 用药方案: 服药不依从率与用药方案密切相关. Hommel等[16]发现服用硫唑嘌呤的不依从率占比42%, 而在5-氨基水杨酸治疗中的占比为50%. Selinger等[17]也认为与服用硫唑嘌呤或免疫抑制剂治疗相比, 服用5-氨基水杨酸的不依从性最常见. 这是由于需要硫唑嘌呤或免疫抑制治疗的患者常处在疾病严重活动期, 可能更能促使患者更好地遵从医嘱. 研究显示长期服用激素的依从性最低[10], 而也有研究[18]认为同时服用激素的患者依从性较高. 因此同时服用激素是否可以提高患者服药依从性还有待进一步研究.

服药不依从率还与患者对用药方案的理解有关, 自从免疫抑制剂及生物制剂应用于临床治疗后, IBD的治疗日趋复杂. 一项关于354例IBD患者对免疫疗法及生物疗法认知的测量研究发现, 只有60%的患者了解免疫疗法及生物疗法的作用[19]. 患者往往因为缺乏知识而出现不规范服药行为.

此外, 额外添加其他一些不必要的处方药也会增加患者的不依从性[20]. 总之用药种类越复杂, 每天用药次数越多, 疗程越长, 患者的依从性越差[15,21].

2.2.2 药物不良反应和特征: IBD常用药物均会出现不同程度的不良反应, 如恶心、呕吐、感染和脱发[22], 出现不良反应后会影响患者服药的依从性[23]. 一项研究[24]显示, 有11%的患者由于发生与药物有关的不良反应而中断服用该药并改为服用其他药物. Ediger等[25]指出有13%的患者由于担心不良反应自行减量甚至停药. Bajaj等[26]证实使用硫唑嘌呤治疗的CD患者中, 有29%的患者早期发生药物不良反应, 是应用硫唑嘌呤治疗自身免疫性肝病的患者发生不良反应的6倍.

药物的口感和性状也会影响患者的服药依从性. 一些研究指出较大的难以吞咽的药物以及味道不佳的药物都会成为患者服药依从性的障碍[16,27]. 另外对于使用美沙拉嗪栓剂意识性不依从的部分患者, 其并没有因为症状的增加而提高对该药的依从性[28].

2.3 患者因素

2.3.1 患者的自身特征: 在小儿IBD患者中, 年龄、性别、种族等社会人口学因素不会增加服药不依从性的风险; 然而在成人IBD患者中, 全日制工作、高等教育水平、单身、男性以及美国黑人都是服药不依从性的高危因素[12,14,25,29-31]. 类似地, Nguyen等[32]也报道依从性与年龄增加以及不断恶化的健康生活质量成正比, 患者的年龄每增加10岁, 相应的依从性可能增加47%, 白人的依从性也比黑人高. 另外, 吸烟也会增加服药不依从性[33].

2.3.2 患者的用药信念及主观因素: 服药不依从性与患者对药物的消极态度有一定的关系. Selinger等[17]发现依从性高的患者对药物治疗的必要性有较强的意识, 他们对药物的担忧更少. Horne等[10]的一项横断面研究中, 通过问卷调查法评估1871位全国结肠炎和克罗恩病协会(the National Association for Colitis and Crohn's Disease, NACC)成员对维持治疗的信任以及依从性的关系, 结果发现这些患者对于维持治疗的依从性只有29%, 并与个人对于维持治疗的需要持质疑态度及担心潜在的不良反应有关, 有趣的是, 这种相关性只在服用5-氨基水杨酸患者身上存在, 对于使用硫唑嘌呤及生物制剂的患者来说没有影响.

在一项纳入107例IBD患者的研究中显示, 66%表现为非意识性的不依从, 忘记服用规定的剂量(63%)或者忽略服药(27%); 16%表现为意识性的不依从, 当患者感觉病情有所好转(13%)或病情恶化(6%)时擅自停药[21].

2.3.3 对疾病的认知程度: 疾病相关知识是人们获得的关于某一疾病在社会学和医学层面的相关信息[34]. 由于缺乏疾病相关知识患者很可能经历恐惧和困惑而进一步影响患者的应对能力和服药依从性[35]. 大量研究表明提高患者的疾病相关知识可以显著增加服药依从性[4,12,36], 随着疾病知识的增加, 使得患者更好地理解疾病和不遵医嘱服药的后果而使得服药依从性提高[37-40]. 但也有研究指出服药不依从性与患者的疾病相关知识无关[17]. 故疾病相关知识与服药依从性之间的关联与否有待更深入的调查研究.

2.3.4 心理因素: 一项纳入1663例IBD患者的调查研究[41]发现, 有181例(11%)表现为抑郁, 有689例(41%)表现为焦虑, 而服药不依从性与焦虑、抑郁密切相关, 呈正相关[42]. 在一项针对青少年IBD患者口服药物维持治疗依从性的

系统评价中, Spekhorst等[43]指出普遍认同的服药依从性降低相关因素为遗忘、外出、受其他活动的影响、家庭功能障碍、同伴侵害、较低的健康相关的生活质量、儿童较差的应对策略、焦虑和抑郁状态. Long等[44]的一项纳入359例老年IBD患者的研究中也发现抑郁症可降低药物治疗的依从性, 在老年IBD患者中识别和治疗抑郁症可提高临床疗效. 而其他报道[17]则显示服药不依从性与患者的焦虑抑郁状态无关. 可见患者的心理因素是否与服药不依从性相关尚存在争议, 有待进一步的调查研究.

2.3.5 经济花费、家庭和社会因素: 患者治疗的经济耗费和缺乏医疗保险支撑是影响服药依从性不容忽视的客观因素之一. 经济压力以及药物成本将迫使患者对如何服药、何时服药做出艰难的决择[25]. Ediger等[25]针对新近诊断的326例加拿大IBD患者依从性数据分析中得出医疗费用是服药依从性最常见的障碍, 25%患者表示医疗费用的支出常常让他们难以坚持服药. Kane[15]也指出随着病程的延长, 依从性也随之降低, 对于住院和门诊IBD患者服药不依从性与高额的医疗费用息息相关.

通过在不同慢性疾病人群的研究中发现家庭冲突可降低服药依从性[45]. 这种影响对于青少年IBD患者更为突出, Mackner等[46]指出小儿IBD患者服药不依从性与家庭功能障碍的程度高低相关. 同样地, Hommel等[16]也指出家庭里或者是父母与子女之间对服药有冲突是依从性的一大障碍. 而青少年以及他们的父母共同参与疾病管理将会有更好的依从性[47,48].

在青少年IBD患者中, 诸如不希望朋友知道自己的病情以及拒绝在公众面前服药等其他社会因素也可能成为服药依从性的障碍[27]. 类似地, 认为药物治疗干涉其他的社会活动也是一个潜在的依从性障碍[16,27,49].

2.4 医患、护患关系 医生和患者之间的合作关系在患者服药依从性中至关重要[50], 有效的交流是提高依从性的重要办法[31]. 很多研究表明医患间的互动对健康的结局和支出有巨大的影响, 而交流的质量和次数同样重要. Sewitch等[18]发现在同一个医生治疗的前提下超过一年未进行患者病情的沟通将会增加意识性不依从的风险, 而医患关系的不和谐将使得这种风险增加更大.

3 结论

IBD既往多见于西方发达国家, 但近20年来我国IBD病例日益剧增. IBD的病因、治疗等方面越来越受更多人的关注, 目前治疗方案已经得到巨大的优化, 但服药依从性较少引起人们的关注, 尤其是在中国. 依从性差将使得疾病的复发率和医疗费用增高、结肠癌的风险大大增加, 给患者的健康、生活质量和社会经济效益造成严重影响[6,7,15,51]. 提高服药依从性是有效治疗IBD的重要策略, 识别影响患者服药依从性的危险因素是进一步干预患者治疗依从性的首要步骤.

总之, IBD患者服药依从性受疾病表现、患者自身特征、用药情况、经济花费、家庭和社会因素、医患关系的影响, 但在患者疾病知识和心理因素方面尚未有统一的结论, 有待进一步的调查研究. 另外, 通过综述上述影响因素, 以便于医务人员更好地识别和把握患者服药不依从因素, 为进一步提高IBD患者的综合治疗效果提供思路, 使得广大IBD患者获益.

应用要点

本文详尽介绍了IBD患者服药依从性影响因素, 将有助于发现处于无依从性或依从性较差的患者, 从而有利于多方面根据患者存在的问题制定针对性的解决方案来提高服药依从性, 并达到长期稳定的防治效果.

4 参考文献

1 Hommel KA, Mackner LM, Denson LA, Crandall WV. Treatment regimen adherence in pediatric gastroenterology. *J Pediatr Gastroenterol Nutr* 2008; 47: 526-543 [PMID: 18955858 DOI: 10.1097/MPG.0b013e318175dda1]

2 Robinson A. Review article: improving adherence to medication in patients with inflammatory bowel disease. *Aliment Pharmacol Ther* 2008; 27 Suppl 1: 9-14 [PMID: 18307644 DOI: 10.1111/j.1365-2036.2008.03604.x]

3 Trindade AJ, Ehrlich A, Kornbluth A, Ullman TA. Are your patients taking their medicine? Validation of a new adherence scale in patients with inflammatory bowel disease and comparison with physician perception of adherence. *Inflamm Bowel Dis* 2011; 17: 599-604 [PMID: 20848512 DOI: 10.1002/ibd.21310]

4 Hawthorne AB, Rubin G, Ghosh S. Review article: medication non-adherence in ulcerative colitis--strategies to improve adherence with mesalazine and other maintenance therapies. *Aliment Pharmacol Ther* 2008; 27: 1157-1166 [PMID: 18384664 DOI: 10.1111/j.1365-2036.2008.03698.x]

5 Hommel KA, Davis CM, Baldassano RN. Objective versus subjective assessment of oral medication adherence in pediatric inflammatory bowel disease. *Inflamm Bowel Dis* 2009; 15: 589-593 [PMID: 18985746 DOI: 10.1002/ibd.20798]

6 Kane S, Huo D, Aikens J, Hanauer S. Medication nonadherence and the outcomes of patients with quiescent ulcerative colitis. *Am J Med* 2003; 114: 39-43 [PMID: 12543288]

7 Mitra D, Hodgkins P, Yen L, Davis KL, Cohen

名词解释

服药依从性：治疗依从性的重要组成部分，是指患者对医嘱的执行程度，是患者遵照医嘱正规服药的表现，实质是患者行为与医嘱的一致性．主要包含了服药剂量准确、服药次数正确、按医生的要求定时服药、坚持长期不间断服药4个方面．

RD. Association between oral 5-ASA adherence and health care utilization and costs among patients with active ulcerative colitis. *BMC Gastroenterol* 2012; 12: 132 [PMID: 23006789 DOI: 10.1186/1471-230X-12-132]

8 Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med* 2005; 353: 487-497 [PMID: 16079372 DOI: 10.1056/NEJMra050100]

9 Bernick SJ, Kane S. Insight into the widespread problem of nonadherence to therapy in ulcerative colitis patients. *Expert Rev Clin Immunol* 2010; 6: 677-682 [PMID: 20594140 DOI: 10.1586/eci.10.28]

10 Horne R, Parham R, Driscoll R, Robinson A. Patients' attitudes to medicines and adherence to maintenance treatment in inflammatory bowel disease. *Inflamm Bowel Dis* 2009; 15: 837-844 [PMID: 19107771 DOI: 10.1002/ibd.20846]

11 Horne R, Chapman SC, Parham R, Freemantle N, Forbes A, Cooper V. Understanding patients' adherence-related beliefs about medicines prescribed for long-term conditions: a meta-analytic review of the Necessity-Concerns Framework. *PLoS One* 2013; 8: e80633 [PMID: 24312488 DOI: 10.1371/journal.pone.0080633]

12 Cervený P, Bortlík M, Kubena A, Vlcek J, Lakatos PL, Lukás M. Nonadherence in inflammatory bowel disease: results of factor analysis. *Inflamm Bowel Dis* 2007; 13: 1244-1249 [PMID: 17538983 DOI: 10.1002/ibd.20189]

13 Sewitch MJ, Leffondré K, Dobkin PL. Clustering patients according to health perceptions: relationships to psychosocial characteristics and medication nonadherence. *J Psychosom Res* 2004; 56: 323-332 [PMID: 15046970 DOI: 10.1016/S0022-3999(03)00508-7]

14 López San Román A, Bermejo F, Carrera E, Pérez-Abad M, Boixeda D. Adherence to treatment in inflammatory bowel disease. *Rev Esp Enferm Dig* 2005; 97: 249-257 [PMID: 15982180]

15 Kane SV. Systematic review: adherence issues in the treatment of ulcerative colitis. *Aliment Pharmacol Ther* 2006; 23: 577-585 [PMID: 16480396 DOI: 10.1111/j.1365-2036.2006.02809.x]

16 Hommel KA, Baldassano RN. Brief report: Barriers to treatment adherence in pediatric inflammatory bowel disease. *J Pediatr Psychol* 2010; 35: 1005-1010 [PMID: 20026567 DOI: 10.1093/jpepsy/jsp126]

17 Selinger CP, Eaden J, Jones DB, Katelaris P, Chapman G, McDonald C, Smith P, Lal S, Leong RW, McLaughlin J, Robinson A. Modifiable factors associated with nonadherence to maintenance medication for inflammatory bowel disease. *Inflamm Bowel Dis* 2013; 19: 2199-2206 [PMID: 23899547 DOI: 10.1097/MIB.0b013e31829ed8a6]

18 Sewitch MJ, Abrahamowicz M, Barkun A, Bitton A, Wild GE, Cohen A, Dobkin PL. Patient nonadherence to medication in inflammatory bowel disease. *Am J Gastroenterol* 2003; 98: 1535-1544 [PMID: 12873575 DOI: 10.1111/j.1572-0241.2003.07522.x]

19 Hilsden RJ, Verhoef MJ, Best A, Pocobelli G. Complementary and alternative medicine use by Canadian patients with inflammatory bowel disease: results from a national survey. *Am J Gastroenterol* 2003; 98: 1563-1568 [PMID: 12873578 DOI: 10.1111/j.1572-0241.2003.07519.x]

20 Quittner AL, Modi AC, Lemanek KL, Ievers-Landis CE, Rapoff MA. Evidence-based assessment of adherence to medical treatments in pediatric psychology. *J Pediatr Psychol* 2008; 33: 916-936; discussion 937-938 [PMID: 17846042 DOI: 10.1093/jpepsy/jsm064]

21 Bermejo F, López-San Román A, Algaba A, Guerra I, Valer P, García-Garzón S, Piqueras B, Villa C, Bermejo A, Rodríguez-Agulló JL. Factors that modify therapy adherence in patients with inflammatory bowel disease. *J Crohns Colitis* 2010; 4: 422-426 [PMID: 21122538 DOI: 10.1016/j.crohns.2010.01.005]

22 Bryant RV, Brain O, Travis SP. Conventional drug therapy for inflammatory bowel disease. *Scand J Gastroenterol* 2015; 50: 90-112 [PMID: 25523560 DOI: 10.3109/00365521.2014.968864]

23 Greenley RN, Stephens M, Doughty A, Raboin T, Kugathasan S. Barriers to adherence among adolescents with inflammatory bowel disease. *Inflamm Bowel Dis* 2010; 16: 36-41 [PMID: 19434722 DOI: 10.1002/ibd.20988]

24 Devlen J, Beusterien K, Yen L, Ahmed A, Cheifetz AS, Moss AC. Barriers to mesalamine adherence in patients with inflammatory bowel disease: a qualitative analysis. *J Manag Care Spec Pharm* 2014; 20: 309-314 [PMID: 24564811]

25 Ediger JP, Walker JR, Graff L, Lix L, Clara I, Rawsthorne P, Rogala L, Miller N, McPhail C, Deering K, Bernstein CN. Predictors of medication adherence in inflammatory bowel disease. *Am J Gastroenterol* 2007; 102: 1417-1426 [PMID: 17437505 DOI: 10.1111/j.1572-0241.2007.01212.x]

26 Bajaj JS, Saeian K, Varma RR, Franco J, Knox JF, Podoll J, Emmons J, Levy M, Binion DG. Increased rates of early adverse reaction to azathioprine in patients with Crohn's disease compared to autoimmune hepatitis: a tertiary referral center experience. *Am J Gastroenterol* 2005; 100: 1121-1125 [PMID: 15842588 DOI: 10.1111/j.1572-0241.2005.41598.x]

27 Schurman JV, Cushing CC, Carpenter E, Christenson K. Volitional and accidental nonadherence to pediatric inflammatory bowel disease treatment plans: initial investigation of associations with quality of life and disease activity. *J Pediatr Psychol* 2011; 36: 116-125 [PMID: 20498007 DOI: 10.1093/jpepsy/jsq046]

28 Boyle M, Ting A, Cury DB, Nanda K, Cheifetz AS, Moss A. Adherence to Rectal Mesalamine in Patients with Ulcerative Colitis. *Inflamm Bowel Dis* 2015; 21: 2873-2878 [PMID: 26313693 DOI: 10.1097/MIB.0000000000000562]

29 Shale MJ, Riley SA. Studies of compliance with delayed-release mesalazine therapy in patients with inflammatory bowel disease. *Aliment Pharmacol Ther* 2003; 18: 191-198 [PMID: 12869079]

30 Bernal I, Domènech E, Garcia-Planella E, Marín L, Mañosa M, Navarro M, Cabré E, Gassull MA. Medication-taking behavior in a cohort of patients with inflammatory bowel disease. *Dig Dis Sci* 2006; 51: 2165-2169 [PMID: 17086434 DOI: 10.1007/s10620-006-9444-2]

31 D'Incà R, Bertomoro P, Mazzocco K, Vettorato MG, Rumiati R, Sturniolo GC. Risk factors for

non-adherence to medication in inflammatory bowel disease patients. *Aliment Pharmacol Ther* 2008; 27: 166-172 [PMID: 17949472 DOI: 10.1111/j.1365-2036.2007.03555.x]
32 Nguyen GC, LaVeist TA, Harris ML, Datta LW, Bayless TM, Brant SR. Patient trust-in-physician and race are predictors of adherence to medical management in inflammatory bowel disease. *Inflamm Bowel Dis* 2009; 15: 1233-1239 [PMID: 19177509 DOI: 10.1002/ibd.20883]
33 Nahon S, Lahmek P, Saas C, Durance C, Olympie A, Lesgourgues B, Gendre JP. Socioeconomic and psychological factors associated with nonadherence to treatment in inflammatory bowel disease patients: results of the ISSEO survey. *Inflamm Bowel Dis* 2011; 17: 1270-1276 [PMID: 21560190 DOI: 10.1002/ibd.21482]
34 Jones SC, Gallacher B, Lobo AJ, Axon AT. A patient knowledge questionnaire in inflammatory bowel disease. *J Clin Gastroenterol* 1993; 17: 21-24 [PMID: 8409293]
35 Casati J, Toner BB, de Rooy EC, Drossman DA, Maunder RG. Concerns of patients with inflammatory bowel disease: a review of emerging themes. *Dig Dis Sci* 2000; 45: 26-31 [PMID: 10695609]
36 Sood A, Midha V, Sood N, Kaushal V. Self-reported disease awareness--a questionnaire survey of ulcerative colitis patients. *Indian J Gastroenterol* 2001; 20: 6-8 [PMID: 11206883]
37 Dudley-Brown S, Nag A, Cullinan C, Ayers M, Hass S, Panjabi S. Health-related quality-of-life evaluation of crohn disease patients after receiving natalizumab therapy. *Gastroenterol Nurs* 2009; 32: 327-339 [PMID: 19820441 DOI: 10.1097/SGA.0b013e3181bb1484]
38 Larsson K, Lööf L, Rönnblom A, Nordin K. Quality of life for patients with exacerbation in inflammatory bowel disease and how they cope with disease activity. *J Psychosom Res* 2008; 64: 139-148 [PMID: 18222127 DOI: 10.1016/j.jpsychores.2007.10.007]
39 Lix LM, Graff LA, Walker JR, Clara I, Rawsthorne P, Rogala L, Miller N, Ediger J, Pretorius T, Bernstein CN. Longitudinal study of quality of life and psychological functioning for active, fluctuating, and inactive disease patterns in inflammatory bowel disease. *Inflamm Bowel Dis* 2008; 14: 1575-1584 [PMID: 18512245 DOI: 10.1002/ibd.20511]
40 Quan H, Present JW, Sutherland LR. Evaluation of educational programs in inflammatory bowel disease. *Inflamm Bowel Dis* 2003; 9: 356-362 [PMID: 14671484]
41 Nahon S, Lahmek P, Durance C, Olympie A, Lesgourgues B, Colombel JF, Gendre JP. Risk factors of anxiety and depression in inflammatory bowel disease. *Inflamm Bowel Dis* 2012; 18: 2086-2091 [PMID: 22294486 DOI: 10.1002/ibd.22888]
42 Gray WN, Denson LA, Baldassano RN, Hommel KA. Treatment adherence in adolescents with inflammatory bowel disease: the collective impact of barriers to adherence and anxiety/depressive symptoms. *J Pediatr Psychol* 2012; 37: 282-291 [PMID: 22080456 DOI: 10.1093/jpepsy/jsr092]
43 Spekhorst LM, Hummel TZ, Benninga MA, van Rheenen PF, Kindermann A. Adherence to Oral Maintenance Treatment in Adolescents With Inflammatory Bowel Disease. *J Pediatr Gastroenterol Nutr* 2016; 62: 264-270 [PMID: 26230905 DOI: 10.1097/MPG.0000000000000924]
44 Long MD, Kappelman MD, Martin CF, Chen W, Anton K, Sandler RS. Risk factors for depression in the elderly inflammatory bowel disease population. *J Crohns Colitis* 2014; 8: 113-119 [PMID: 23932782 DOI: 10.1016/j.crohns.2013.07.002]
45 Fiese BH, Everhart RS. Medical adherence and childhood chronic illness: family daily management skills and emotional climate as emerging contributors. *Curr Opin Pediatr* 2006; 18: 551-557 [PMID: 16969171 DOI: 10.1097/01.mop.0000245357.68207.9b]
46 Mackner LM, Crandall WV. Oral medication adherence in pediatric inflammatory bowel disease. *Inflamm Bowel Dis* 2005; 11: 1006-1012 [PMID: 16239847]
47 Greenley RN, Kunz JH, Biank V, Martinez A, Miranda A, Noe J, Telega G, Tipnis NA, Werlin S, Stephens MC. Identifying youth nonadherence in clinical settings: data-based recommendations for children and adolescents with inflammatory bowel disease. *Inflamm Bowel Dis* 2012; 18: 1254-1259 [PMID: 22689633 DOI: 10.1002/ibd.21859]
48 Reed-Knight B, Lewis JD, Blount RL. Association of disease, adolescent, and family factors with medication adherence in pediatric inflammatory bowel disease. *J Pediatr Psychol* 2011; 36: 308-317 [PMID: 20798185 DOI: 10.1093/jpepsy/jsq076]
49 Ingerski LM, Baldassano RN, Denson LA, Hommel KA. Barriers to oral medication adherence for adolescents with inflammatory bowel disease. *J Pediatr Psychol* 2010; 35: 683-691 [PMID: 19776229 DOI: 10.1093/jpepsy/jsp085]
50 Jackson CA, Clatworthy J, Robinson A, Horne R. Factors associated with non-adherence to oral medication for inflammatory bowel disease: a systematic review. *Am J Gastroenterol* 2010; 105: 525-539 [PMID: 19997092 DOI: 10.1038/ajg.2009.685]
51 Feagins LA, Iqbal R, Spechler SJ. Case-control study of factors that trigger inflammatory bowel disease flares. *World J Gastroenterol* 2014; 20: 4329-4334 [PMID: 24764669 DOI: 10.3748/wjg.v20.i15.4329]

同行评价

本文对IBD患者的服药依从性的相关因素进行了较为全面、清晰的总结，对临床进一步提高IBD患者治疗效果具有实际意义.

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