

注意力缺陷与多动障碍儿童的口腔疾病研究进展

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摘 要

注意力缺陷与多动障碍(ADHD, 简称多动症)是儿童期高发的慢性神经发育障碍, 以与年龄不匹配的注意力不足、多动冲动为核心表现, 常伴随认知、情绪及社交能力异常, 需药物、行为干预等综合措施改善远期预后。与健康儿童相比, ADHD儿童口腔健康状况更严峻, 疾病更复杂、进展更快, 且诊疗配合度差, 增加了临床治疗难度。ADHD儿童常见龋齿、牙周病、牙外伤等口腔疾病, 其中龋齿发生率显著偏高, 与患儿不良口腔习惯密切相关——注意力不集中导致无法规范刷牙, 且常挑食、频繁进食甜食, 加重口腔菌群紊乱, 加速龋齿进展。同时, 多动冲动的特点不仅增加口腔外伤风险, 也使其在诊疗中难以配合医生, 易出现哭闹、挣扎, 影响治疗效果甚至导致治疗中断。此外, ADHD儿童常与焦虑、对立违抗等精神行为问题共病, 进一步降低其口腔健康意识和自我管理能力, 形成恶性循环。掌握其行为特点与口腔疾病规律, 是制定个体化诊疗方案的关键。近年来, 多媒体引导、分时段诊疗、多学科协作等新型干预模式逐步应用, 为改善其口腔健康提供新路径。本文就ADHD儿童口腔疾病特征、危险因素及防治进展进行综述, 为临床实践提供参考。

关键词

注意力缺陷与多动障碍, 口腔疾病, 龋病, 牙外伤, 自伤性溃疡, 口腔行为管理

Research Progress of Oral Diseases in ADHD Children

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Abstract

Attention Deficit Hyperactivity Disorder (ADHD), commonly known as hyperactivity disorder, is a prevalent chronic neurodevelopmental disorder in childhood. It is characterized by age-inappropriate inattention, hyperactivity and impulsivity as core manifestations, often accompanied by abnormalities in cognitive, emotional and social abilities. Comprehensive interventions including medication and behavioral intervention are required to improve long-term prognosis. Compared with healthy children, children with ADHD present poorer oral health conditions, more complex oral diseases with faster progression, as well as poor cooperation during diagnosis and treatment, which increases the difficulty of clinical management. Children with ADHD are susceptible to common oral diseases such as dental caries, periodontal diseases and dental trauma. Among these, the incidence of dental caries is markedly higher, which is closely associated with their unhealthy oral habits. Inattention makes them unable to brush their teeth in a standardized manner; moreover, they are often picky eaters and frequently consume sweets, aggravating the disturbance of oral flora and accelerating the progression of dental caries. Meanwhile, the traits of hyperactivity and impulsivity not only raise the risk of oral trauma, but also make it difficult for them to cooperate with dentists during treatment. They tend to cry and struggle, undermining therapeutic effects and even leading to treatment interruption. In addition, children with ADHD often have comorbid mental and behavioral problems such as anxiety and oppositional defiant disorder, which further reduce their awareness of oral health and self-management ability, thus forming a vicious cycle. Understanding their behavioral characteristics and the pathogenesis pattern of oral diseases is the key to developing individualized diagnosis and treatment protocols. In recent years, novel intervention models such as multimedia guidance, time-phased diagnosis and treatment, and multidisciplinary collaboration have been gradually applied, providing new approaches to improve their oral health. This article reviews the characteristics, risk factors and research progress in the prevention and treatment of oral diseases in children with ADHD, so as to provide references for clinical practice.

Keywords

ADHD, Oral Diseases, Dental Caries, Dental Trauma, Self-Inflicted Oral Ulcer, Oral Behavioral Management

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1. 引言

注意力缺陷与多动障碍(Attention Deficit Hyperactivity Disorder, ADHD, 简称多动症)是儿童期最常见的神经发育障碍之一,以注意力涣散、活动过度、冲动控制力差为典型表现,根据症状可分为三种类型:以注意力缺陷为主型、以多动-冲动为主型,以及两种类型表现程度相当的混合型[1][2]。症状可持续至成年期[3][4],男孩患病率明显高于女孩[5][6]。有研究显示,2021年中国儿童和青少年的精神障碍年龄标准化患病率为8.9%,这意味着约每10个青少年中存在1个受到精神障碍的困扰,其中ADHD是患病率最高的疾病[7]。受行为依从性差、专科照护资源不足、家庭重视程度不够等因素影响,ADHD儿童口腔健康需求长期未被充分满足,龋病、牙周炎症、牙外伤、自伤性溃疡等问题高发且控制不佳[8]。基于此,本文系统梳理ADHD儿童口腔疾病的临床特征、流行病学证据及综合防治策略,为临床规范化管理

提供依据。

2. ADHD 儿童的口腔疾病特征及相关流行病学证据

2.1. 龋病高发且进展迅速

多项研究与 Meta 分析证实, ADHD 儿童龋病患病率显著高于同龄健康儿童, 恒牙龋失补指数(DMFT)与乳牙龋补指数(DFT)均明显升高[8][9], 致病原因主要包括三方面: 一是中枢兴奋剂(哌甲酯、安非他明等)具有抗胆碱能作用, 可降低唾液流速、减弱缓冲能力, 使口腔环境偏酸, 致龋菌增殖加速[10][11]; 二是注意力与执行力不足导致刷牙不规范、频次不足、清洁效率低下[12]; 三是 ADHD 儿童每日进食、喝饮料频次超过 5 次的风险, 是对照儿童的 1.74 倍[13], 并且家庭照护中常以高糖零食作为行为奖励, 进一步提升龋病风险[14][15]。短效哌甲酯对唾液分泌抑制更明显, 使用者龋病风险高于长效制剂使用者。龋损以窝沟龋、邻面龋为主, 未治疗龋多见、进展迅速, 与口腔清洁不足、高糖饮食及唾液防护能力下降直接相关[16][17]提出, 该疾病本身注意缺陷的特征, 可能导致儿童无法有效地进行刷牙等常规口腔清洁活动, 缺乏保持良好口腔卫生的动力[14][15]。由于 ADHD 儿童无法维持注意力和专注力, 挫折耐受力低, 组织行为差, 因此其诊疗配合程度欠佳, 难以完成常规充填与随访, 进一步加重病情[18][19]。

2.2. 自伤性溃疡

ADHD 是儿童自伤性口腔溃疡最主要的精神行为诱因之一, 因冲动控制障碍、注意力缺陷导致反复咬颊、咬舌、咬唇等非自杀性自伤行为, 引发黏膜破损与溃疡, 自伤性口腔溃疡多见于男性儿童青少年, 好发于颊脂垫尖、舌缘、下唇, 溃疡形态不规则、周围伴白色角化, 疼痛轻微但迁延不愈、极易复发。临床常被误诊为复发性阿弗他溃疡、白斑或癌性溃疡, 需结合自伤习惯与行为量表确诊[20][21]。

有研究发现, ADHD 患者更容易产生自伤性口腔溃疡, 这与其注意缺陷、多动、冲动的特征密切相关, 这类患儿常在无法控制自己负面情绪时, 出现自伤性行为, 进而导致自伤性溃疡的发生。当患儿出现铅中毒时, 可能会进一步导致 ADHD, 有研究证实, 学龄儿童血铅水平超过 $20 \mu\text{g}\cdot\text{L}^{-1}$ 可增加患 ADHD 的可能性[22]。有学者指出, 儿童血液中铁水平的下降与 ADHD 的发生有关, 由于缺铁导致的严重贫血, 会影响大脑的发育, 导致患儿智力、注意力下降等[23]。

2.3. 牙周疾病

长期服用安非他明等兴奋剂的 ADHD 儿童, 牙龈增生风险显著升高, 较健康同龄人增加约 30%, 用药 5 个月即可出现轻度增生, 但增生程度与药物剂量无明确关联[20]。同时, ADHD 儿童菌斑堆积更多、牙龈出血率更高, 虽牙龈炎检出率与健康儿童无显著统计学差异, 但牙龈红肿、刷牙出血等临床表现更常见, 提示早期牙周风险更高[21][22]。由于注意力持续时间短, 此类患儿对口腔卫生指导的接受度与执行力均较低, 牙周维护难度更大。

研究发现, 注意力缺陷多动障碍(ADHD)患儿及青少年的牙龈出血发生率显著高于非 ADHD 对照人群, 但二者在牙菌斑指数及广泛性牙龈炎检出率方面均无统计学差异[24]。同时, 该研究亦未发现 ADHD 症状与牙菌斑积聚、牙龈炎发生之间存在具有统计学意义的关联[25]。

上述结果提示, 尽管牙龈出血等部分牙龈健康相关表现在 ADHD 儿童中更为常见, 但此类指标异常并不等同于临床牙周健康状况的恶化。该差异提示, 在评估 ADHD 儿童口腔健康风险时, 不能仅依据 ADHD 的整体诊断进行判断, 更应重视个体行为特征、口腔卫生习惯及相关环境因素的综合作用[26]。

除此之外, 因情绪障碍引起的全身系统性疾病, 包括肥胖、糖尿病和哮喘等[27]-[29], 也会导致生活质量下降, 从而产生牙周疾病。

2.4. 牙外伤

ADHD 儿童因多动、冲动、平衡协调能力差、危险识别能力不足、攻击破坏性行为等[30][31], 牙外伤发生率显著高于普通儿童[32]-[34], 以前牙折裂、缺损最为常见[35][36], 跌倒、撞击是主要原因, 极少数儿童会卷入暴力或虐待事件[37], 且治疗配合度低导致外伤后复诊与修复率低, 易遗留牙体缺损、牙髓坏死等远期问题[35]。被诊断患有注意力缺陷多动障碍(ADHD)并接受相应治疗的儿童, 其门牙外伤的发生率显著高于未患 ADHD 的同龄人[38]。

2.5. 错骀畸形

ADHD 与错骀畸形的高患病率[39]和严重程度相关[40], 其原因是嗜睡、磨牙、咬指甲等口腔不良习惯导致牙弓缩窄[41][42], 且由于儿童长期治疗依从性和合作性较差, 因此面临更高的正畸治疗并发症、复发、治疗中断的风险[43]。母乳喂养缺失或不足导致铁蛋白水平降低, 可能因铁在多巴胺能活性中的作用而增加 ADHD 的易感性, 随后过度使用奶瓶喂养可能导致非营养性吸吮习惯(如使用安抚奶嘴和吮吸拇指)的发生率升高, 这些行为均与错骀畸形的发生风险相关[44]。此外, 中枢兴奋剂, 如哌甲酯等药物副作用, 也是诱因之一[45][46]。

3. 口腔疾病预防与治疗策略

3.1. 龋病综合防控

龋病是临床上最常见的儿童口腔疾病之一, ADHD 儿童的龋病高发且进展迅速, 对于这类儿童的龋病综合防控十分关键。ADHD 药物可有效改善行为与注意力, 不应因担心口腔副作用而停药, 临床应采用药物治疗 + 行为干预 + 口腔预防的综合模式, 该方案应包括: 每 3 至 4 个月复诊一次, 并进行专业洁治; 每次就诊时强化口腔卫生指导; 使用抗菌漱口水等[47], 必须定期评估患者的口腔健康状况, 甚至在患者开始服用药物前, 就应开始实施牙科护理方案。减少高糖摄入, 避免以甜食作为行为奖励; 尽早行窝沟封闭; 简化刷牙流程, 使用电动牙刷并由家长全程监督; 口干明显者使用无糖口香糖或人工唾液, 缓解唾液不足[48]。

3.2. 牙周与牙龈问题管理

针对药物性牙龈增生与菌斑性牙龈炎, 建立定期维护方案: 每 3~4 个月复查并专业洁治; 每次复诊强化口腔卫生指导, 采用可视化、短时段、游戏化教学; 配合安全剂量抗菌含漱液控制菌斑与炎症; 用药前即开展口腔基线评估, 实现早监测、早干预。

3.3. 自伤性溃疡个性化治疗

自伤性溃疡重在预防, 以纠正自伤行为为核心, 采取多学科联合方案: 局部消炎、止痛、促进愈合; 开展行为干预、正向引导与习惯矫正; 补充铁、锌、钙等微量元素, 血铅超标者进行排铅治疗; 联合精神行为科干预, 改善冲动与情绪问题[21]。

3.4. 牙外伤防治

运动及户外活动时佩戴护齿套, 降低外伤风险; 牙外伤后尽早急诊处理, 减少牙髓与根尖周并发症; 采用短时、分次、镇静辅助等方式完成修复治疗, 提高患儿配合度[37]。除此以外, 应增加经常接触该类儿童的专业人员处理牙外伤的知识, 如教师、教育工作者和保健老师等。ADHD 儿童对创伤性损伤的易感性更高, 这种知识储备的差距凸显了对未来专业人员进行系统化培训、以及采用多学科协作模式来早

期识别并妥善应对此类病例的紧迫性[49]。

3.5. 正畸个性化管理

对于 ADHD 儿童错颌畸形的治疗, 不应改变正畸治疗的核心原则与目标, 但应启动更高等级的预警与支持体系。一项探讨智商与正畸治疗需求关系的研究, 未发现认知能力与错颌畸形严重程度之间存在显著关联, 尽管行为和认知特征可能影响特定口腔健康指标, 但不应将其作为整体口腔状况的通用预测指标[50]。因此, 在诊断和治疗方案制定过程中, 早期筛查与识别 ADHD、跨学科协作、针对性干预口腔不良习惯, 以便进行个体化行为管理, 并且家长全程参与监督, 配合更频繁、短时、结构化复诊, 通过以上策略, 可显著提升治疗的配合度、完成率与最终效果[51]。

3.6. 诊疗行为优化

考虑 ADHD 儿童注意力不足的特点, 在临床上应优先安排清晨就诊, 此时患儿注意力相对集中、情绪更稳定[18] [52]; 缩短单次诊疗时长, 增加复诊频次, 减少挫败感, 缓解牙科焦虑和恐惧[53]; 采用“告知-展示-操作”流程, 配合多媒体视觉引导提升配合度; 麻醉医师、患儿家长及学校教师应提前警惕 ADHD 儿童麻醉诱导配合障碍, 以及术后在家、在校出现各类行为问题的潜在风险[54]; 此类儿童常伴有多动的行为特征, 在儿童采取其他行为管理技术后仍无法配合时, 可在保护性束缚下进行口腔治疗。强化家长参与, 家庭亲密度会影响牙科就诊行为[55] [56], 由监护人协助口腔清洁、饮食管理与复诊监督。

4. 总结与展望

注意力缺陷多动障碍是儿童阶段高发的慢性神经发育障碍。当下儿童心理健康已受到社会广泛重视, 但该群体的口腔健康问题却时常被忽视。本文结合现有研究发现, ADHD 儿童的口腔疾病存在独特的行为特征与发病规律, 并就此开展相关文献综述。作为口腔临床医师, 我们也需充分重视儿童心理状态对口腔疾病产生的影响。有研究显示, FOXP2 基因频繁被发现与多种神经发育障碍相关, 包括注意力缺陷与多动障碍[57]。ADHD 儿童口腔疾病以龋病高发、牙周炎症、自伤性溃疡、牙外伤风险升高为核心特征, 受行为习惯、药物副作用、营养因素及家庭照护多重影响, 治疗难度大、复发率高。临床医生应摒弃单纯口腔治疗模式, 建立口腔科 + 儿童保健科 + 精神行为科 + 家庭协同管理体系[58], 以预防为先、早期介入、个性化干预为原则, 显著改善患儿口腔健康与生活质量[34] [59]。

未来需开展更多高质量队列研究, 明确 ADHD 药物与口腔疾病的长期关系, 并开发更适合 ADHD 儿童的行为管理工具与口腔保健模式, 推动特殊人群口腔健康服务规范化、普惠化。

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