

父母干预对患儿术前焦虑影响的研究进展

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【摘要】 随着我国经济的发展和科技的进步,患儿围术期舒适化医疗也在逐步推进中。舒适化医疗不仅减轻了患儿身体的病痛,更避免了手术和麻醉等操作对其心理造成的永久性创伤。患儿术前焦虑发生率高于成年患者,可对患儿围术期及预后产生不良影响。不同患儿父母的特征,如父母焦虑水平、父母受教育程度、父母社会经济背景、家庭组成及种族和语言等因素会影响患儿的术前焦虑水平。父母参与指导患儿麻醉前准备、管理患儿禁食禁饮和陪伴患儿接受麻醉诱导等干预措施可缓解患儿的术前焦虑水平。对于残疾患儿,父母在围术期与医务人员的信息沟通和对患儿的干预管理更为重要。与传统的术前准备方案比较,基于互联网的家庭术前准备平台可以为患儿家庭提供更加全面、有效、个性化的信息指导,保障患儿围术期舒适化医疗。

【关键词】 父母;儿童;术前焦虑;残疾;互联网平台;舒适化医疗

Research progress on the influence and intervention of parents on preoperative anxiety in children

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【Abstract】 With the development of our economy and the progress of science and technology, the comfort medicine of children in the perioperative period is gradually promoted. Comfort medicine not only eliminates the physical pain of children, but also avoids the permanent psychological trauma caused by operation and anesthesia. The incidence of preoperative anxiety in children is higher than that in adults, which may have adverse effects on perioperative period and prognosis of children. The characteristics of parents of different children, such as parental anxiety level, parental education level, parental socioeconomic background, family composition, ethnicity, language, and other factors will affect the preoperative anxiety level of children. Intervention measures such as parents' participation in guiding children's preparation for anesthesia, management of children's fasting and drinking, and presence at the induction of anesthesia can alleviate children's preoperative anxiety level. For children with disabilities, communication between parents and medical staff in the perioperative period and intervention management of children is important. Compared with the traditional preoperative preparation program, the internet-based family preoperative preparation platform provides a comprehensive, effective and personalized information guidance for the families of children, ensuring the comfortable perioperative medical treatment of children.

【Key words】 Parent; Child; Preoperative anxiety; Disability; Internet program; Comfort medicine

患儿术前焦虑是一个不容忽视的问题,大约 42%~75% 接受全身麻醉的患儿会出现术前焦虑^[1]。在英国的一项前瞻性观察研究^[2]中,67% 的患儿会在麻醉诱导期间表现出高度焦虑。术前焦虑的患儿发生围术期不良事件如反流误吸、痛觉过敏、苏醒期躁动和谵妄等的风险更高^[3-4]。目前降低患儿术前焦虑水平的干预措施主要分为药理学和非药理学方法,然而“父母”作为一种非药理学干

预措施却常常被忽视。本文将围绕父母对患儿术前焦虑的影响和干预进行综述,并对互联网背景下以家庭为单位的患儿围术期管理作出展望。

父母对患儿术前焦虑的影响

提到“手术”或“麻醉”,大部分患儿和父母会在术前产生焦虑。患儿术前焦虑的影响因素包括年龄、成熟度、气质和既往的麻醉经历等^[5]。此外,不同患儿父母所具备的特征,如父母焦虑水平、父母受教育程度、父母社会经济背景、家庭组成及种族和语言等因素也会影响患儿的术前焦虑水平。

患儿术前焦虑水平会受到父母焦虑的影响。

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Pomicino 等^[6]研究表明,在心脏外科和泌尿外科的患儿父母更容易焦虑,并且母亲的焦虑水平明显高于父亲。赵紫健等^[7]研究表明,在患儿耳鼻喉科手术中,术前父母焦虑会影响患儿的焦虑水平,并可明显增加患儿术后行为改变的发生率。围术期父母的恐惧、焦虑和担忧等心理变化会传导到患儿,患儿尤其会受到母亲的影响^[8-9]。相反,父母若在患儿的治疗过程中表现出积极和乐观的态度,将会对患儿的围术期治疗产生积极影响^[10]。

父母受教育程度可作为患儿术前焦虑水平的潜在预测因素^[11]。Cheng 等^[12]研究表明,父母受教育程度可作为预测术前高度焦虑患儿临床模型中的预测变量,如果父母文化水平低于高中,患儿术前焦虑风险会明显增加。父母社会经济背景影响患儿术前焦虑水平, Malik 等^[13]研究表明,在发展中国家,处于中下阶层或贫困阶层的父母和患儿,其术前焦虑水平较低。此外,作为独生子女的患儿,或有亲兄弟姐妹的长子或长女,术前可表现出较高的焦虑水平^[14-15]。种族和语言等文化因素也与患儿术前焦虑水平相关。Mamtora 等^[16]研究表明,来自西班牙语拉丁裔家庭的患儿比英语家庭的患儿术前焦虑水平更高。Stevenson 等^[17]研究表明,跨种族文化交流适应程度较高的家庭,父母在患儿术前表现的焦虑和压力水平更高,因此在多元族群家庭中制定针对性的文化干预措施可减少患儿的焦虑和疼痛。

父母对患儿术前焦虑的干预

父母在患儿围术期扮演重要角色,影响着患儿的行为、心理变化和术前焦虑水平。作为术前陪伴患儿时间最长的监护人,父母通过积极参与患儿的术前准备工作,可帮助患儿缓解术前焦虑,平稳度过围术期。

指导患儿麻醉前准备 在麻醉科医师的引导下,父母可参与患儿麻醉前准备工作,如熟悉手术室环境和麻醉流程等,这有助于减轻患儿与父母的分离焦虑,提高患儿麻醉诱导期的依从性。Walker 等^[18]研究表明,父母在术前 1 d 指导患儿熟悉麻醉面罩的塑形和使用,可有效降低患儿手术当天的改良耶鲁术前焦虑量表评分(modified Yale preoperative anxiety scale, mYPAS),使患儿更配合麻醉诱导。Yang 等^[19]研究表明,父母引导学龄前患儿在家阅读与麻醉手术相关的动画图书,可以使患儿的 mYPAS 评分下降 20%,诱导期合作度量表(the in-

duction compliance checklist, ICC) 评分下降 15%。因此,术前父母帮助患儿熟悉麻醉手术流程和环境,参与麻醉前准备工作,对于缓解患儿的术前焦虑是行之有效的^[20]。

管理患儿禁食禁饮 口渴、饥饿、焦虑和疼痛是患儿在围术期的常见问题^[21]。全麻手术前禁食禁饮对于保障麻醉诱导期的安全性至关重要,但过度的禁食禁饮有增加围术期发生电解质紊乱、脱水、低血糖、烦躁和焦虑等并发症的风险^[22-23]。Al-Robeye 等^[24]研究表明,过度禁食禁饮所致的饥饿或口渴可加重患儿焦虑的情绪。Khanna 等^[25]研究表明,术前禁食时间过长可能是患儿全麻术后谵妄的危险因素。因此,患儿术前禁食禁饮时间的管理是降低术前焦虑的一个重要环节。在保证患儿围术期安全的前提下,父母应与医务人员充分沟通优化禁食禁饮时间,在减少反流误吸风险和改善患儿术前体验之间找到平衡,帮助患儿更平稳地度过围术期^[26]。

陪伴患儿接受麻醉诱导 麻醉诱导期患儿与父母的分离是导致焦虑的一个重要因素,这是围术期父母和患儿焦虑程度最严重的阶段^[13]。对父母陪伴麻醉诱导(parent presence at the induction of anesthesia, PPIA) 的临床研究表明,PPIA 可有效改善麻醉手术进程,提高患儿及父母的满意度^[27-28]。并且对于神经外科等高风险手术,PPIA 还有助于塑造医患信任环境,使医患之间建立更加可靠牢固的信任关系^[29]。

但是 PPIA 的有效性尚存在争议。父母作为非医学专业人员,存在扰乱手术室工作秩序的风险。Johnson 等^[30]报道了一例父母中断患儿麻醉诱导过程的案例。因此,医务人员需要对患儿父母进行必要的围术期筛查、科学宣教以及制定应急计划,以预防 PPIA 过程中的意外情况。

随着加速康复外科(enhanced recovery after surgery, ERAS) 理念和互联网技术的推广与普及,PPIA 的临床应用也在进一步扩大。Wingler 等^[31]研究表明,与传统手术室比较,在日间或门诊手术室使用专门的“诱导室”进行 PPIA,患儿的焦虑视觉模拟量表(visual analog scale, VAS) 评分、儿童状态-特质焦虑量表(state-trait anxiety inventory for children, STAIC) 评分,以及反映生理焦虑水平的皮肤电活动频率均有明显降低。Rodriguez 等^[32]研究表明,当视频干预与 PPIA 结合时,患儿术前焦虑水平更低,且诱导依从性更高。Gupta 等^[33]报道,利用

虚拟现实(virtual reality, VR)生成的三维模拟环境分散患儿注意力以减少患儿术前焦虑并提高术中依从性的案例。患儿通过 VR 技术在麻醉诱导过程中维持与父母联系,可避免父母在场所致的风险,这可能是未来 PPIA 缓解患儿术前焦虑发展的新形式。

父母对残疾患儿术前焦虑的干预

与发育正常的患儿比较,残疾患儿由于各种原因导致的身体、精神、心理或感官的缺陷,难以有效、平等地参与术前准备工作。在与医务人员的接触中残疾患儿更容易产生焦虑情绪^[34],通常表现为不合作,甚至有极端暴力行为^[35]。如自闭症(autism spectrum disorders, ASD)患儿通常难以适应新环境和新事物,其术前焦虑程度更高,麻醉诱导依从性更差^[36]。此时父母是孩子的医疗“专家”,父母熟知患儿激动或平静的诱发因素,对焦虑和疼痛的表达、可用于安慰的措施等^[37-38]。因此,父母所提供的患儿日常行为心理模式和特殊需求,是麻醉科医师评估患儿术前焦虑水平和术后疼痛程度的重要参考依据。

残疾患儿的围术期管理较为复杂,父母对其术前焦虑的影响和干预则更为重要。父母应与医务人员积极沟通传递残疾患儿特殊信息,协助制定个体化的术前准备计划,以满足其在围术期的特殊需求,缓解残疾患儿的焦虑情绪^[39]。

家庭互联网平台改善患儿术前焦虑

患儿和父母是一个整体,以家庭为单位参与手术过程,能更有效干预患儿的术前焦虑水平。随着互联网技术的普及,基于互联网平台对患儿家庭进行干预的措施不断涌现。与传统的口头或书面信息比较,利用互联网进行全面的术前准备具有内容广泛、实时更新、个性定制、经济方便等诸多优势。

个性化术前准备网 在美国,每年有数百万患儿接受门诊手术,在门诊手术环境中大多数患儿和父母的术前准备是不足的,据统计绝大多数患儿会经历严重的围术期焦虑和疼痛^[40]。个性化术前准备网(web-based tailored intervention for preparation of parents and children for outpatient surgery, WebTIPS)是一个专为门诊手术患儿家庭设计的网站,其中包括教育、技能培训和互动游戏等多种板块,能够帮助患儿做好围术期的准备工作,为父母提供术前信息和技能培训,并教授处理围术期焦虑和疼痛的策

略。此外,WebTIPS 还可以根据父母的偏好,同时参考父母和患儿的性格特征,以及患儿最喜欢的兴趣和活动等,最终为患儿家庭提供个性化的术前准备方案^[41]。Fortier 等^[42]研究表明,WebTIPS 深受患儿家庭的欢迎,可有效缓解患儿及父母在术前的焦虑情绪,降低患儿术后谵妄的风险。目前 WebTIPS 的推广和普及程度并不高,尚缺乏大规模的临床试验以验证 WebTIPS 的有效性。

家庭术前准备计划 家庭术前准备计划(home-initiated-programme-to-prepare-for-operation, HIPPO)是一个主要针对学龄期患儿的教育平台,它根据患儿不同年龄段,为家庭提供对应的术前准备活动表,并通过动画视频展现入院程序、手术室设置、麻醉诱导流程和术后恢复等信息。患儿和父母需要在术前 3 d 内观看视频,并完成对应年龄段的术前准备工作。但是 HIPPO 缺少学习者与教育者之间的互动,由于不同年龄段患儿的理解能力不同,如果患儿和父母之间的沟通不足或无效时,患儿的术前焦虑水平可能会进一步加剧。Nair 等^[43]研究表明,尽管 HIPPO 是一种对患儿友好和经济实用的教育平台,但它并没有减少患儿在术前等待区或麻醉诱导期间的焦虑水平,未来应考虑患儿与受过培训的专业人员(如儿童生活专家)进行一对一的术前准备计划,为患儿提供更准确术前评估和情感支持。

互联网围术期项目 互联网围术期项目(internet-delivered preoperative program, I-PPP)是一个主要面向接受日间手术的学龄前期患儿的术前准备平台。该项目由患儿和家长两个模块组成,可通过 VR 技术引导患儿和父母完成对医院的参观,同时为患儿家庭提供日间手术相关的情绪管理经验、麻醉设备宣教、技能训练方案等。Wright 等^[44]研究表明,顺利完成 I-PPP 的患儿在转运手术室过程、进入日间手术室及麻醉诱导期间的焦虑水平均有所缓解,以麻醉诱导期间效果最为明显。但是, I-PPP 不能为患儿家庭提供个性化的干预措施,缺乏缓解父母术前焦虑的方案,存在父母影响患儿术前焦虑水平的可能。

小 结

随着我国医疗水平的不断进步,患儿围术期心理健康的保护愈加受到关注,而对患儿术前焦虑的有效干预是围术期管理中至关重要的一个环节。父母在患儿围术期扮演重要角色,良好的父母干预

可以缓解患儿的术前焦虑水平。未来在“互联网+医疗健康”的政策背景下,医务人员应推广完善基于互联网平台的家庭术前准备项目,发挥移动医疗和远程医疗的优势,让父母更有效地参与到术前准备环节,不断完善个体化的围术期管理措施,帮助患儿家庭做好充分的围术期准备工作,有效缓解患儿术前焦虑水平,保障患儿围术期舒适化医疗。

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