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新进展综述

经皮神经电刺激用于宫腔镜检查术后止痛的研究概况

许莉莉(综述), 杨柳(审校)

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作者单位: 530021 南宁, 广西壮族自治区人民医院妇科

作者简介: 许莉莉(1982-), 女, 医学硕士, 副主任医师, 研究方向: 盆底功能障碍性疾病的诊治。E-mail: 25475453@qq.com

通讯作者: 杨柳(1976-), 女, 研究生学历, 学士学位, 副主任医师, 研究方向: 妇科内分泌疾病的诊治。E-mail: liuliu92190@aliyun.com.cn

[摘要] 宫腔镜检查具有准确率高、创伤小、快速、便捷等优点, 已成为妇科门诊常用的检查方法, 然而仍有很大一部分患者因不能耐受疼痛而导致检查失败, 因此如何缓解宫腔镜检查手术疼痛受到越来越多人的关注。经皮神经电刺激是一种以治疗疼痛为主的无损伤性的治疗方法, 该文就经皮神经电刺激用于宫腔镜检查术后止痛的研究概况进行综述。

[关键词] 宫腔镜检查; 止痛; 经皮神经电刺激; 研究进展

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Research progress of transcutaneous electric nervous stimulation in pain management after hysteroscopy XU Li-li, YANG Liu. Department of Gynecology, the People's Hospital of Guangxi Zhuang Autonomous Region, Nanning 530021, China

[Abstract] Hysteroscopy can be performed in the outpatient department of gynecology, which is a common, safe, feasible, and accurate procedure. However, a major obstacle to its successful implementation as a commonplace procedure is pain management. Transcutaneous electric nervous stimulation is a nonpharmacologic pain-relieving method based on the delivery of pulsed electrical currents through the skin. In this paper, we review the research progress of transcutaneous electric nervous stimulation in pain management after hysteroscopy.

[Key words] Hysteroscopy; Pain management; Transcutaneous electric nervous stimulation; Research progress

宫腔镜检查是一项妇科微创诊疗技术, 可以在直视下了解子宫形态, 确定子宫内病灶的部位、大小、外观及范围, 并且能定位取材, 大大地提高了子

宫腔疾病的诊断准确率, 目前已广泛应用于子宫疾病的诊断、治疗和随访^[1,2]。宫腔镜检查具有准确率高、创伤小、快速、便捷等优点, 已成为妇科门诊常

用的检查方法,用于异常子宫出血、子宫内膜病变(如子宫内膜息肉、子宫内膜癌等)、子宫肌瘤、宫腔粘连、反复性流产、不孕症等疾病^[3]。过去在很多医院妇科门诊中进行宫腔镜检查时并不给予任何形式的镇痛或麻醉,也能获得很高的成功率和患者良好的耐受性,但仍有相当一部分患者因不能耐受疼痛而导致检查失败^[4,5]。因此随着人们生活质量的提高以及社会-心理-医学模式的发展,如何缓解宫腔镜检查术后疼痛受到越来越多人的关注。

1 宫腔镜检查术中及术后疼痛不适的原因

引起宫腔镜检查术中及术后疼痛不适的原因主要有以下几个方面:(1)扩张宫颈时应激性引起宫颈痉挛导致疼痛及腰部酸胀不适;(2)膨宫液膨胀宫腔引起宫腔压力增加,刺激迷走神经兴奋引起疼痛,患者甚至出现头晕、胸闷、恶心等类似人工流产综合征的症状;(3)作为一种侵入性操作,应激性刺激下丘脑交感-肾上腺髓质反应系统,可引起患者心率加快、血压升高等应激综合征;(4)宫腔镜检查时患者的紧张、不安、焦虑甚至恐惧等负面情绪及心理变化,可导致前列腺素合成增加、子宫张力及敏感度增加、痛阈下降,导致轻度刺激便可引起患者较强的疼痛^[6~8]。

2 缓解宫腔镜检查疼痛的方法

在过去的几十年里,不少学者尝试以不同的方法缓解宫腔镜检查带来的疼痛不适,但目前仍未见公认的最佳止痛方法。有研究^[9]在宫腔镜检查前阴道使用米索前列醇片软化宫颈,以减少宫颈扩张引起的疼痛不适。Al-Fozan等^[10]的一项多中心随机对照临床研究也证实了这个方法的有效性,该研究共对1 870例患者进行宫腔镜手术疼痛评估,结果发现术前使用地诺米索酮片可有效地扩张宫颈,进而达到缓解手术疼痛不适的目的。由于宫颈扩张应激性引起宫颈痉挛导致疼痛,因此有学者^[11]通过Meta分析后提出使用小管径的宫腔镜可以减少患者术中及术后疼痛的观点,然而,Alessandro等^[12]并不同意这一观点,他们认为宫腔镜检查疼痛的程度并不仅仅是使用型号不同的宫腔镜引起,因为通过口服、肌肉注射、宫颈注射、静脉注射以及直肠灌注药物镇痛或使用麻醉药物(如曲马多、利多卡因、双氯芬酸等)也能在一定程度上提高患者对宫腔镜手术疼痛的耐受性^[13~16]。此外,心理干预也是缓解宫腔镜检查致患者焦虑恐惧情绪,减轻疼痛不适的重要方法^[17,18]。

3 经皮神经电刺激疗法

20世纪70年代,经皮神经电刺激疗法又称周围神经粗纤维电刺激疗法(transcutaneous electric nervous stimulation, TENS)逐渐被人们认识,它是一种以治疗疼痛为主的无损伤性的治疗方法,目前在欧美发达国家中非常普及^[19]。TENS的频率一般为1~150 Hz,脉冲宽度为0.04~0.3 ms,仅产生持续的双相波形,形状一般为变形方波,没有直流成分,因此没有极性^[20]。由于其参数多变的特点,TENS可用于下列全身多个部位急慢性疼痛的治疗:(1)术后切口疼痛:包括各种胸、腹部手术、关节手术等,TENS能减少止痛药物的摄入,使患者能早期活动,减少术后并发症,缩短住院时间^[21,22]。(2)内科相关慢性顽固性疼痛,如偏头痛、关节炎、颞下颌功能紊乱等,TENS和口服止痛药物的效果相似,亦能达到缓解疼痛,解除患者痛苦的目的^[23~25]。(3)妇产科疼痛:如因分娩引起的腰痛、骨盆疼痛,会阴侧切术后及子宫内膜活检术后引起的疼痛等^[26,27]。Lisón等^[28]将138例宫腔镜检查患者随机分为实验组、对照组及安慰剂组,结果发现术中行TENS治疗的患者(实验组)其疼痛明显缓解,组间差异有统计学意义。其止痛的作用机制可能为:(1)闸门控制假说:TENS可刺激兴奋粗纤维进而关闭疼痛传入的闸门,从而缓解疼痛的症状;(2)内源性啡样物质释放假说:TENS可能激活脑内的啡多肽能神经元释放啡样多肽,抑制前列腺素分泌,对抗前列腺素作用,提高痛阈,缓解疼痛;(3)促进局部血液循环:局部刺激加速肌肉收缩和神经传导运动,使机体血液循环加快,增加炎性物质代谢,减少炎性物质堆积,同时通过局部刺激,抑制毛细血管的通透性,减少炎性物质渗出及组织水肿,促进炎性包块的吸收及消散,抑制炎性肉芽形成,解除炎症及其周围粘连;(4)TENS刺激引起T细胞亚群百分率的变化,调节机体免疫功能,增强机体耐受疼痛刺激^[24]。综上所述,TENS治疗疼痛安全,效果确切,有可能成为治疗宫腔镜检查术后疼痛的主要方法。

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