doi: 10.13241/j.cnki.pmb.2018.21.018

微血管减压术在三叉神经痛患者中的应用及预后分析 *

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摘要 目的:分析微血管减压术在三叉神经痛患者中的应用及预后效果。**方法:**选取 2015 年 8 月至 2016 年 7 月我院收治的 86 例三叉神经痛患者,根据患者入院顺序分为观察组 43 例和对照组 43 例。对照组予以三叉神经节射频热凝治疗,观察组使用微血管减压术完成治疗。比较两组患者临床疗效,疼痛情况、睡眠情况,生存质量。**结果:**治疗后,观察组临床总有效率显著高于对照组[93.02%(40/43)比 72.09%(31/43)](P<0.05)。观察组的视觉模拟评分(VAS)、匹茨堡睡眠质量指数量表评分(PSQI)显著低于对照组 [(3.35± 0.31) 分、(7.02± 0.81) 分比 (5.68± 0.57) 分、(8.45± 0.92) 分](P<0.05)。观察组的生存质量评分显著高于对照组[(83.43± 8.22)分比(68.98± 6.51)分](P<0.05)。**结论:**在三叉神经痛患者中经微血管减压术治疗,能降低患者疼痛程度,提高睡眠质量和生存质量,有利于患者预后的改善。

关键词:微血管减压术;三叉神经痛;预后

中图分类号:R745.11 **文献标识码:**A **文章编号:**1673-6273(2018)21-4087-04

Analysis Application and Prognostic of Microvascular Decompression in Patients with Trigeminal Neuralgia*

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ABSTRACT Objective: To analyze the application and prognosis of microvascular decompression in patients with trigeminal neuralgia. **Methods:** From August 2015 to July 2016, 86 patients with trigeminal neuralgia were selected in our hospital, those patients were divided into observation group (43 cases) and control group (43 cases) according to the order of admission. The control group was given radiofrequency thermocoagulation treatment of trigeminal ganglion, the observation group using microvascular decompression to complete the treatment. Comparison of two groups of patients with clinical efficacy, surgical conditions, complications and recurrence. **Results:** After treatment, the total effective rate of the observation group was significantly higher than that of the control group [93.02% (40/43) vs 72.09% (31/43)] (P<0.05). Visual analog scale (VAS) and Pittsburgh Sleep Quality Index Scale (PSQI) in the observation group were significantly lower than those in the control group [(3.35± 0.31) points, (7.02± 0.81) points vs (5.68± 0.57) points (8.45± 0.92) points] (P<0.05). The quality of life score of the observation group was significantly higher than that of the control group [(83.43± 8.22) points vs (68.98± 6.51)points](P<0.05). **Conclusion:** Treatment of patients with trigeminal neuralgia by microvascular decompression can reduce the degree of pain in patients, and improve the quality of sleep and quality of life is conducive to improving the prognosis of patients.

Key words: Microvascular decompression; Trigeminal neuralgia; Prognosis

Chinese Library Classification(CLC): R745.11 Document code: A

Article ID: 1673-6273(2018)21-4087-04

前言

三叉神经痛作为神经系统疾病，发病人群以在中老年为主,患者一旦出现三叉神经痛,将会有难以忍受的剧烈性疼痛发生,并且发作呈现出周期性,给患者造成极大的痛苦[1,2]。

尽管卡马西平等药物治疗三叉神经痛能获得良好的临床疗效,但伴随着长时间的应用,再加之患者对药物产生的耐药性,其临床有效性会越来越差,为有效控制临床症状,常常会加大药物剂量的使用,进而引发严重不良后果[3,4]。目前在治疗三叉神经痛时已逐渐将外科手术应用其中,微血管减压术是应用得较为常见的一种治疗方式[5]。为给临床在治疗三叉神经痛方面提供可借鉴之处,本文就微血管减压术对三叉神经痛患者的影响进行探讨。

1 资料与方法

1.1 一般资料

将 2015 年 8 月 ~2016 年 7 月我院收治的 86 例三叉神经痛患者纳入本次研究。纳入标准:① 患者的临床诊断和《神经病

* 基金项目:国家自然科学基金面上项目(81171153)

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(收稿日期:2018-04-04 接受日期:2018-04-28)

学》[6]中的诊断标准相符；① 均通过 MRI 检查，提示颅内器质性病变；② 依从性较好者，能配合医护人员完成本次研究。排除标准：① 严重器质性疾病合并者；② 小脑桥脑角区肿瘤合并者；③ ；难以接受本次手术治疗者；④ 哺乳期或妊娠期患者。根据入院顺序分为观察组和对照组，每组 43 例。观察组男 23 例，女 20 例；年龄为 28~69 岁，平均(47.24± 4.87)岁；病程为 1~15 年，平均(8.34± 2.14)年；疼痛部位：21 例左侧，22 例右侧。对照组中男性 25 例，女性 18 例；年龄为 29~68 岁，平均(47.19± 4.91)岁；病程为 1~14 年，平均(8.36± 2.17)年；疼痛部位：24 例左侧，19 例右侧。两组患者性别、年龄、病程等方面比较无差异(P>0.05)。

1.2 方法

按照患者病情程度和病症状态开展相关治疗和护理，在此基础上，对照组行三叉神经节射频热凝，通过穿刺点局麻，在导航下完成经皮卵圆孔穿刺，放置射频电极针，加热至 55~75°，30 秒 / 次，总共 4~6 次，便可实现止痛目的，卵圆孔穿刺准确情况可通过 X 一线透视或 CT 定位完成。观察组行微血管减压术，全麻后，手术切口、三叉神经显露部位均和部分切断术一致，当确认致病血管后，当对血管神经上的蛛网膜进行分离后，随之隔离神经和血管，用双极电凝把神经和血管切断分离，然后缝合切口。

1.3 观察指标

评价两组患者临床疗效，标准如下：术后，临床症状有所消失，并且无需使用药物治疗则为显效；术后，临床症状有所缓解，但依然需要使用少量药物则为好转；术后，临床症状并没有得到改善甚至加重，使用药物依然难以缓解患者痛苦为无效[7]。

分析患者治疗前后疼痛和睡眠情况，使用疼痛视觉模拟评分法(VAS)[8]评价疼痛情况，无痛 0 分；轻微疼痛但能忍受则为 3 分以下；疼痛尚能忍受，但会影响睡眠质量则为 4~6 分；难以忍受的疼痛感为 7~10 分。评价睡眠质量，通过匹茨堡睡眠质量指数量表评分法(PSQI)完成，睡眠非常好，不会受到外界干扰则为 0~5 分；睡眠质量较好，基本上不会受到影响则为 6~10 分；睡眠质量一般，偶尔会受到影响则为 11~15 分；睡眠质量较差，难以进入睡眠则为 16~21 分。分析两组患者治疗前后生存质量改善情况，使用 SF-36[9]生存质量量表评价生存质量，共有 36 个项目，总分为 145 分，分数越高，提示生存质量越高。

1.4 统计学处理

用 SPSS11.5 软件包处理实验数据，($\bar{x}$± s)表示计量资料，经 t 检验，[n(%)]表示计数资料和等级资料，经 x^2 检验及秩和检验，P<0.05 有统计学意义。

2 结果

2.1 临床疗效

治疗后，观察组总有效率高于对照组 [93.02%(40/43)比 72.09%(31/43)(P<0.05)，见表 1。

表 1 两组患者临床疗效分析[n(%)]

Table 1 Analysis of clinical efficacy between two groups[n(%)]

Group	Case	Effective	Improve	Invalid	Total effective
Observation group	43	32(74.42)	8(18.60)	3(6.98)	40(93.02)*
Control group	43	16(37.21)	15(34.88)	12(27.91)	31(72.09)

Note: compared with control group, *P<0.05.

2.2 VAS、PSQI 评分分析

治疗前，两组患者 VAS、PSQI 评分比较无差异(P>0.05)，治疗后，两组患者 VAS、PSQI 评分低于治疗前(P<0.05)，和对照组相比，观察组的 VAS、PSQI 评分较低(P<0.05)，见表 2。

表 2 两组患者 VAS、PSQI 评分比较($\bar{x}$± s)

Table 2 Comparison of VAS, PSQI scale between two groups($\bar{x}$± s)

Group	Case	VAS scale(points)		PSQI scale(points)	
		Before treatment	After treatment	Before treatment	After treatment
Observation group	43	8.32± 0.81	3.35± 0.31*#	12.02± 1.42	7.02± 0.81*
Control group	43	8.25± 0.76	5.68± 0.57*#	11.78± 1.34	8.45± 0.92*

Note: compared with before treatment, *P<0.05; compared with control group after treatment, #P<0.05.

2.3 生存质量情况分析

治疗前，两组患者生存质量评分比较无差异(P>0.05)，两组患者治疗后的生存质量评分高于治疗前(P<0.05)，而观察组的生存质量评分高于对照组(P<0.05)，见表 3。

表 3 两组患者生存质量情况分析($\bar{x}$± s)

Table 3 Analysis of quality of life between two groups($\bar{x}$± s)

Group	Case	Quality of Life Score(points)	
		Before treatment	After treatment
Observation group	43	45.43± 4.02	83.43± 8.22*#
Control group	43	46.12± 3.98	68.98± 6.51*

Note: compared with before treatment, *P<0.05; compared with control group after treatment, #P<0.05.

3 讨论

三叉神经痛,在临床中主要表现为反复发作、面部三叉神经分布区短暂的疼痛。在治疗此病中常常先用药物止痛,尽管大多数患者的病情能有所缓解，然而因长时间服药难以忍受、药物无效、或药物副作用的患者常常会被迫停药,因此可采取外科疗法方式或神经阻滞疗法[10-12]。其中外科疗法包括甘油注射术、球囊压迫术、射频热凝术、微血管减压术、三叉神经感觉根部分切断术、三叉神经剥落术、立体定向放射外科治疗[13,14]。

大多数研究者表面原发性三叉神经痛的发生很大程度上和神经根部的微血管压迫有关,鉴于以上理论基础,在治疗原发性三叉神经痛中已将微血管减压术逐渐纳入其中[15]。此方式基于微血管压迫学说,根据原发性三叉神经痛发病原因,微血管减压术能解除神经压迫，并且可保留三叉神经生理功能,具有小骨窗面积小、切口小,能防止无效开颅部分给患者造成的损伤,并且能降低复发率,减少开颅时间和出血量[16-18]。

相关研究者提出经微血管减压术式治疗三叉神经痛患者,高达90%左右的患者为显效或完全缓解,并且大多数患者是安全的,若患者对药物治疗无效,并且身体健康良好者可使用此方案完成治疗[19,20]。相关研究显示,在治疗三叉神经痛中经微血管减压术可更为细致的观察手术视野,进而降低手术给患者带来的受损程度[21]。本次研究结果显示,通过对三叉神经痛患者予以微血管减压术后,发现患者在治疗后的VAS、PSQI评分均得到显著下降,且降低的程度比射频热凝方案显著,并且临床有效率明显比射频热凝方案高,提示血管减压术能降低三叉神经痛患者的疼痛感,增强治疗效果。和相关研究者的观点具有一致性[22]。可能是因为微血管减压术能有效分离一起接触和分离的血管,从中减少脱髓鞘病变,相应地对三叉神经感觉核阈下所出现的兴奋超敏状态能起着抑制作用,减少疼痛发生的几率[23-25]。除此之外,减压术作为微创型,不但对于神经根形态及功能的完整性做到保留,而且抑制疼痛的效果较为迅速,以至于神经受损程度较小,几乎不会影响患者神经功能,因此,在治疗三叉神经痛时,可将其作为首选[26-28]。虽然射频电凝疗法几乎不会影响神经及引发创伤，但在某种程度上均会损害神经,因此疗效不及微血管减压术[29,30]。除此之外,血管减压术能三叉神经痛提高患者生活质量,表明长时间内疼痛会因为微血管减压术而有所缓解,因此,给患者心理所带来的影响是积极的,相应提高患者生活质量,有利于患者预后的改善。

综上所述，在三叉神经痛患者中经微血管减压术治疗,能降低患者疼痛程度,提高睡眠质量和生活质量,有利于患者预后的改善。

参 考 文 献(References)

[1] 王济濉,李超,陈腾,等.单纯神经内镜下微血管减压术治疗原发性三叉神经痛[J].山东大学学报(医学版), 2015, 12(4): 83-86
Wang Ji-wei, Li Chao, Chen Teng, et al. Simple endoscopic microvascular decompression in the treatment of primary trigeminal neuralgia [J]. Journal of Shandong University (Medical Science), 2015, 12(4): 83-86

[2] 李世亭,郑学胜.三叉神经痛微创外科治疗的现状与思考[J].实用医学杂志, 2014, 11(21): 3375-3378
Li Shi-ting, Zheng Xue-sheng. Minimally invasive surgical treatment of trigeminal neuralgia status and thinking [J]. Journal of Practical Medicine, 2014, 11(21): 3375-3378

[3] 朱蔚林,漆松涛.改良微血管减压术治疗原发性三叉神经痛疗效分析[J].实用医学杂志, 2013, 29(16): 2697-2700
Zhu Wei-lin, Qi Song-tao. Modified microvascular decompression in the treatment of primary trigeminal neuralgia [J]. Journal of Practical Medicine, 2013, 29(16): 2697-2700

[4] 翟晓雷,刘连松.不同类型三叉神经痛与神经压迫位置的关系[J].临床神经病学杂志, 2015, 12(4): 291-292
Zhai Xiao-lei, Liu Lian-song. Different types of trigeminal neuralgia and nerve compression position [J]. Journal of Clinical Neurology, 2015, 12(4): 291-292

[5] Zakrzewska JM. Letter to the Editor: Internal neurolysis for trigeminal neuralgia[J]. Journal of neurosurgery, 2015, 123(6): 1612-1614

[6] 吴江.神经病学[M]. 北京:人民卫生出版社, 2010: 126
Wu Jiang. Neurology [M]. Beijing: People's Medical Publishing House, 2010: 126

[7] 翟明玉,黄祥,康芳,等.羟考酮对三叉神经微血管减压术患者术后早期恢复质量的影响[J].临床麻醉学杂志, 2017, 33(5): 430-433
Zhai Ming-yu, Huang Xiang, Kang Fang, et al. Effect of oxycodone on the quality of trigeminal nerve microvascular decompression in patients with early postoperative recovery [J]. Journal of Clinical Anesthesiology, 2017, 33(5): 430-433

[8] 袁艳丽,宋立婷,焦来文.威伐光与加巴喷丁对带状疱疹后神经痛疗效及VAS评分作用分析[J].陕西医学杂志, 2017, 46(05): 660-661
Yuan Yan-li, Song Li-ting, Jiao Lai-wen. Weifu light and gabapentin on post-herpetic neuralgia efficacy and VAS score analysis [J]. Shaanxi Medical Journal, 2017, 46(05): 660-661

[9] 岳玉国,杨春梅,王莉珺,等.SF-36量表在下肢慢性缺血患者生存质量评价中的应用[J].中国老年学杂志, 2013, 33(22): 5692-5694
Yue Yu-guo, Yang Chun-mei, Wang Li-jun, et al. SFS-36 in the evaluation of quality of life of patients with chronic lower limb ischemia [J]. Chinese Journal of Gerontology, 2013, 33(22): 5692-5694

[10] 张斌,张良文,迟令懿,等.显微血管减压术治疗原发性三叉神经痛疗效的相关因素[J].山东大学学报(医学版), 2016, 54(6): 69-72
Zhang Bin, Zhang Liang-wen, Chi Ling-yi, et al. Microvascular decompression in the treatment of primary trigeminal neuralgia related factors [J]. Journal of Shandong University (Medical Science), 2016, 54 (6): 69-72

[11] Jha AN. Trigeminal neuralgia: Therapeutic options[J]. Neurology India, 2015, 63(6): 837-840

[12] 陈广鑫,徐伦山,许民辉,等.三叉神经痛显微血管减压术中对静脉压迫的处理[J].重庆医学, 2013, 42(11): 1280-1281
Chen Guang-xin, Xu Lun-shan, Xu Min-hui, et al. Treatment of venous compression during trigeminal neuralgia with microvascular decompression[J]. Chongqing Medicine, 2013, 42(11): 1280-1281

[13] García-Moreno H, Aledo-Serrano Á, Gimeno-Hernández J , et al. External Nasal Neuralgia: A Neuropathic Pain Within the Territory of the External Nasal Nerve[J]. Headache, 2015, 55(9): 1259-1262

[14] 仲骏.微血管减压术治疗三叉神经痛之手术理念[J].实用医学杂志, 2014, 11(21): 3381-3383
Zhong Jun. Microvascular decompression surgery for the treatment of

trigeminal neuralgia [J]. Journal of Practical Medicine, 2014, 11(21): 3381-3383

[15] 郑捷敏,闫宪磊,陈家康,等.微血管减压术治疗 36 例原发性三叉神经痛疗效分析[J].重庆医学, 2013, 12(27): 3293-3294
Zheng Jie-min, Yan Xian-lei, Chen Jia-kang, et al. Microvascular decompression in the treatment of 36 cases of primary trigeminal neuralgia[J]. Chongqing Medical University, 2013, 12(27): 3293-3294

[16] Isherwood G, Ansell M. Sphenopalatine block in the management of trigeminal neuralgia [J]. The British journal of oral & maxillofacial surgery, 2016, 54(2): 226-227

[17] Zdilla MJ, Hatfield SA, McLean KA, et al. Circularity, Solidity, Axes of a Best Fit Ellipse, Aspect Ratio, and Roundness of the Foramen Ovale: A Morphometric Analysis With Neurosurgical Considerations [J]. The Journal of craniofacial surgery, 2016, 27(1): 222-228

[18] Can İ, Tholakanahalli V. Carbamazepine-induced atrioventricular block in an elderly woman [J]. Turk Kardiyoloji Dernegi arsivi: Turk Kardiyoloji Derneginin yayin organidir, 2016, 44(1): 68-70

[19] Zakrzewska JM. Letter to the Editor: Internal neurolysis for trigeminal neuralgia[J]. Journal of neurosurgery, 2015, 123(6):1612-1613

[20] Jha AN. Trigeminal neuralgia: Therapeutic options[J]. Neurology India, 2015, 63(6): 837-840

[21] Kodeeswaran M, Ramesh VG, Saravanan N, et al. Percutaneous retrogasserian glycerol rhizotomy for trigeminal neuralgia: A simple, safe, cost-effective procedure [J]. Neurology India, 2015, 63 (6): 889-894

[22] Jin HS, Shin JY, Kim YC, et al. Predictive Factors Associated with Success and Failure for Radiofrequency Thermocoagulation in Patients with Trigeminal Neuralgia [J]. Pain physician, 2015, 18 (6): 537-545

[23] Zhao QQ, Qian XY, An JX, et al. Rat Model of Trigeminal Neuralgia Using Cobra Venom Mimics the Electron Microscopy, Behavioral, and Anticonvulsant Drug Responses Seen in Patients [J]. Pain physician, 2015, 18(6): E1083-E1090

[24] García-Moreno H, Aledo-Serrano Á, Gimeno-Hernández J, et al. External Nasal Neuralgia: A Neuropathic Pain Within the Territory of the External Nasal Nerve[J]. Headache, 2015, 55(9): 1259-1262

[25] Lee JY, Sandhu S, Miller D, et al. Higher dose rate Gamma Knife radiosurgery may provide earlier and longer-lasting pain relief for patients with trigeminal neuralgia[J]. Journal of neurosurgery, 2015, 123 (4): 961-968

[26] Kowacs PA, Utiumi MA, Nascimento FA, et al. OnabotulinumtoxinA for trigeminal neuralgia: a review of the available data [J]. Arquivos de neuro-psiquiatria, 2015, 73(10): 877-884

[27] 孔君,陈陆旭.原发性三叉神经痛微血管减压术后预后影响因素研究的进展[J].东南大学学报(医学版), 2016, 35(5): 821-823
Kong Jun, Chen Lu-kui. Prognostic factors of trigeminal neuralgia after microvascular decompression [J]. Journal of Southeast University (Medical Science), 2016, 35(5): 821-823

[28] 刘晗,杜捷,曹宏等.改良微血管减压术治疗原发性三叉神经痛 188 例[J].中国老年学杂志, 2014, 11(23): 6803-6804
Liu Han, Du Jie, Cao Hong, et al. Modified microvascular decompression in the treatment of 188 cases of primary trigeminal neuralgia[J]. Chinese Journal of Gerontology, 2014, 11(23): 6803-6804

[29] Pelluru PK, Rajesh A. Enigmatic intracranial cyst causing diplopia and trigeminal neuralgia [J]. Asian journal of neurosurgery, 2015, 10 (4): 316-318

[30] Oomens MA, Forouzanfar T. Pharmaceutical Management of Trigeminal Neuralgia in the Elderly [J]. Drugs & aging, 2015, 32(9): 717-726

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[21] Eschalier R, Souteyrand G, Jean F, et al. Should an implanted defibrillator be considered in patients with vasospastic angina[J]. Archives of Cardiovascular Diseases, 2014, 107(1): 42

[22] Dézsi C A. Trimetazidine in Practice: Review of the Clinical and Experimental Evidence [J]. American Journal of Therapeutics, 2014, 23 (3): e871-e879

[23] Asensio-López M C, Soler F, Pascual-Figal D, et al. Doxorubicin-induced oxidative stress: The protective effect of nicorandil on HL-1 cardiomyocytes[J]. Plos One, 2017, 12(2): e0172803

[24] Ma N, Bai J, Zhang W, et al. Trimetazidine protects against cardiac ischemia/reperfusion injury via effects on cardiac miRNA-21 expression, Akt and the Bcl-2/Bax pathway[J]. Molecular Medicine Reports, 2016, 14(5): 4216-4222

[25] Ambrosio G, Tamargo J, Grant P J. Non-haemodynamic anti-anginal agents in the management of patients with stable coronary artery disease and diabetes: A review of the evidence [J]. Diabetes & Vascular Disease Research, 2016, 13(2): 98

[26] Shehata M. Cardioprotective effects of oral nicorandil use in diabetic patients undergoing elective percutaneous coronary intervention [J]. Journal of Interventional Cardiology, 2015, 27(5): 472-481

[27] Zhang F, Cui J, Lv B O, et al. Nicorandil protects mesenchymal stem cells against hypoxia and serum deprivation-induced apoptosis[J]. International Journal of Molecular Medicine, 2015, 36(2): 415-423

[28] Tanaka N, Takahashi Y, Ishihara H, et al. Usefulness and Safety of Intracoronary Administration of Nicorandil for Evaluating Fractional Flow Reserve in Japanese Patients [J]. Clinical Cardiology, 2015, 38 (1): 20-24

[29] Keun-Ho P, Ho J M, Youngkeun A, et al. The Impact of Vascular Access for In-Hospital Major Bleeding in Patients with Acute Coronary Syndrome at Moderate- to Very High-Bleeding Risk [J]. Journal of Korean Medical Science, 2013, 28(9): 1307-1315

[30] Cavar M, Ljubkovic M, Bulat C, et al. Trimetazidine does not alter metabolic substrate oxidation in cardiac mitochondria of target patient population [J]. British Journal of Pharmacology, 2016, 173(9): 1529-1540

[31] Rehberger-Likozar A, Šebeštjen M. Influence of trimetazidine and ranolazine on endothelial function in patients with ischemic heart disease[J]. Coronary Artery Disease, 2015, 26(8): 651