

Gufoni 法治疗向地性眼震型水平半规管良性阵发性位置性眩晕效果分析

耿娟娟 陈莹华 段燕 赵翠青 陆奇胜

【摘要】 目的 探讨 Gufoni 法治疗向地性眼震型水平半规管良性阵发性位置性眩晕的有效性。方法 选择 2016 年 1-12 月共 87 例向地性眼震型水平半规管良性阵发性位置性眩晕患者,均采用 Gufoni 法复位 2 次,次日复查,仍存在向地性眼震和眩晕者,再次行 Gufoni 法复位 2 次,30 min 后复查。结果 87 例患者经 Gufoni 法复位后,次日复查有效率为 71.26%(62/87),再次复位后有效率为 86.21%(75/87)。12 例无效患者中 8 例仍存在向地性眼震,予强迫侧卧位法治愈;4 例转变为后半规管良性阵发性位置性眩晕,予 Epley 法复位治愈。**结论** Gufoni 法可以作为治疗向地性眼震型水平半规管良性阵发性位置性眩晕的有效方法,且多次重复可以提高疗效。

【关键词】 眩晕; 耳石膜; 半规管; 眼震,病理性

The efficacy of Gufoni maneuver for treating geotropic nystagmus horizontal semicircular canal benign paroxysmal positional vertigo

GENG Juan-juan¹, CHEN Ying-hua², DUAN Yan¹, ZHAO Cui-qing¹, LU Qi-sheng¹

¹Department of Otorhinolaryngology, Guangzhou Hospital of Integrated Traditional and West Medicine, Guangzhou 510800, Guangdong, China

²Department of Otolaryngology, Nanning Red Cross Hospital, Nanning 530012, Guangxi, China

GENG Juan-juan and CHEN Ying-hua contributed equally to the article

Corresponding author: GENG Juan-juan (Email: juanjuan8009@163.com)

【Abstract】 Objective To investigate the efficacy of Gufoni maneuver for treating geotropic nystagmus horizontal semicircular canal benign paroxysmal positional vertigo (BPPV). **Methods** We retrospectively analyzed 87 patients diagnosed as geotropic nystagmus horizontal semicircular canal BPPV from January to December 2016. All patients were treated by Gufoni maneuver twice and examined on the next day to access the status of BPPV. Patients still with geotropic nystagmus or dizziness were treated by Gufoni maneuver twice again and examined after 30 min. The effect was assessed by "Diagnosis basis and curative effect appraisal of benign paroxysmal positional vertigo (2006, Guiyang)". **Results** The success rate of first treatment by Gufoni maneuver achieved to 71.26% (62/87) and increased to 86.21% (75/87) after the second treatment. Among these patients, 12 patients failed to recover, 8 of whom were treated by forced prolonged position (FPP) and recovered after one week, and 4 of whom turned to be posterior semicircular canal BPPV and were treated by Epley maneuver successfully. **Conclusions** Gufoni maneuver is proved to be a good treatment for geotropic nystagmus horizontal semicircular canal BPPV and the efficacy increases after repeated treatment.

【Key words】 Vertigo; Otolithic membrane; Semicircular canals; Nystagmus, pathologic

This study was supported by Research Project of Guangxi Zhuang Autonomous Region Health Department (No. Z2013708).

Conflicts of interest: none declared

doi:10.3969/j.issn.1672-6731.2019.01.008

基金项目:广西壮族自治区卫生厅科研计划课题(项目编号:Z2013708)

作者单位:510800 广东省广州市中西医结合医院耳鼻咽喉科(耿娟娟,段燕,赵翠青,陆奇胜);530012 广西壮族自治区南宁市红十字会医院耳鼻喉科(陈莹华)

耿娟娟与陈莹华对本文有同等贡献

通讯作者:耿娟娟,Email:juanjuan8009@163.com

良性阵发性位置性眩晕(BPPV)是临床十分常见的前庭周围性眩晕,尤以后半规管良性阵发性位置性眩晕(PC-BPPV)发病率最高,其次是水平半规管良性阵发性位置性眩晕(HC-BPPV),文献报道后者发病率为5%~33%^[1-2]。水平半规管良性阵发性位置性眩晕根据眼震类型分为向地性眼震型和背地性眼震型两种类型,游离耳石位于水平半规管后臂时,临床表现为向地性眼震型;游离耳石位于水平半规管前臂或黏附于壶腹嵴嵴帽上时,临床表现为背地性眼震型;前者发病率高于后者^[2]。向地性眼震型水平半规管良性阵发性位置性眩晕的治疗以手法复位为主,复位方法有多种,目前国内应用较多的是Barbecue法,但其成功率较低^[3],且易转变为背地性眼震型水平半规管良性阵发性位置性眩晕^[4],且复位过程中眩晕症状严重甚至无法耐受。而Gufoni法要求患者偏向眼震较弱侧,复位过程中眩晕、恶心、呕吐等症状较轻微。本研究采用Gufoni法治疗87例向地性眼震型水平半规管良性阵发性位置性眩晕患者,评价其有效性,以为临床治疗向地性眼震型水平半规管良性阵发性位置性眩晕提供新的方法。

资料与方法

一、临床资料

1. 纳入标准 (1)向地性眼震型水平半规管良性阵发性位置性眩晕的诊断符合《良性阵发性位置性眩晕的诊断依据和疗效评估(2006年,贵阳)》^[5]:①体位改变诱发的短暂性、反复发作眩晕,持续时间 ≤ 1 min。②滚转试验(roll test)诱发位置性眼震,眼震方向为水平眼震并朝向低位耳,即向地性眼震。③诱发眼震时有眩晕发作。(2)本研究经广东省广州市中西医结合医院和广西壮族自治区南宁市红十字会医院道德伦理委员会审核批准,所有患者或其家属均知情同意并签署知情同意书。

2. 排除标准 (1)其他半规管或多半规管诱发的眩晕。(2)中枢神经系统病变导致的眩晕。(3)其他疾病,如梅尼埃病(MD)、偏头痛、前庭神经炎等。

3. 一般资料 选择2016年1-12月在广东省广州市中西医结合医院和广西壮族自治区南宁市红十字会医院治疗的向地性眼震型水平半规管良性阵发性位置性眩晕患者共87例,其中,男性31例,女性56例;年龄20~73岁,平均(55.23 \pm 16.42)岁;病程1~12 d,中位病程5.20(2.00,8.00) d;所有患者

均采用Gufoni法。

二、研究方法

1. Gufoni法 (1)判断患侧:经滚转试验诱发水平眼震较强的一侧为患侧;若双侧眼震强度相近,难以判断患侧时,采用低头-后仰试验(bow and lean test)^[6]和正坐-仰卧试验(lying-down test)^[7],低头-后仰试验嘱患者坐位,向前低头90°,观察水平眼震方向,朝向侧为患侧,然后向后仰头45°,观察水平眼震方向,朝向侧为健侧;正坐-仰卧试验嘱患者由正坐位转变为仰卧位,观察水平眼震方向,朝向侧为健侧。(2)复位方法:嘱患者双腿自然下垂坐于床边;由正坐位快速变为健侧位侧卧,并保持2 min;快速将头部向地旋转45°,并保持 ≥ 2 min;回到初始坐位。所有患者连续进行Gufoni法复位2次,次日复查;复查时仍存在向地性眼震和眩晕的患者,再次进行Gufoni法复位2次,30 min后复查;仍存在向地性眼震的患者,采取强迫健侧卧位法(FPP)。

2. 疗效评价 采用《良性阵发性位置性眩晕的诊断依据和疗效评估(2006年,贵阳)》^[5]评价Gufoni法疗效:有效,位置性眼震或眩晕完全消失;无效,位置性眼震和眩晕无变化、加剧或转变为其他类型良性阵发性位置性眩晕。

结 果

本组87例患者均随访1周,无一失访。所有患者均行Gufoni法复位2次,次日复查有效率为71.26%(62/87);余25例仍存在向地性眼震的患者,再次行Gufoni法复位2次,30 min后复查有效率为52%(13/25);总有效率为86.21%(75/87)。12例无效患者中8例仍存在向地性眼震,予强迫健侧卧位法,1周后复查治愈;4例转变为后半规管良性阵发性位置性眩晕,行Epley法复位,治愈。

讨 论

水平半规管良性阵发性位置性眩晕最早于1985年由McClure描述^[8],此后得到临床广泛关注,其治疗以手法复位为主,常用方法包括Barbecue法、强迫健侧卧位法、Gufoni法等,各有其优缺点且成功率各不相同。

研究显示,单纯Barbecue法复位1次的成功率 $< 75\%$ ^[3],多次复位可以提高成功率^[9],而Barbecue法联合强迫健侧卧位法的高成功率高达90%^[10]。然而,进行Barbecue法复位时,多数首诊

患者出现剧烈眩晕和呕吐等前庭刺激症状,表现为极度不适感;且采用该方法转变为背地性眼震型水平半规管良性阵发性位置性眩晕的概率较高。Nuti 等^[4]采用 Barbecue 法治疗 38 例向地性眼震型水平半规管良性阵发性位置性眩晕患者,3 例(7.89%)转变为背地性眼震型水平半规管良性阵发性位置性眩晕。究其原因笔者认为,(1)复位前患侧判断错误,使耳石背离椭圆囊方向移动,进入半规管前臂或黏附于壶腹嵴嵴帽。(2)复位前患侧判断准确,但耳石与管壁黏附,未能随头位运动而移动,患侧卧位时从半规管后臂直接掉入前臂。

强迫健侧卧位法嘱患者长时间健侧卧位,故前庭刺激症状(眩晕、恶心、呕吐)较轻微,但是由于长时间保持一个固定姿势,难以坚持,且部分患者可出现肌肉痛和不适感。Korres 等^[11]分别采用 Barbecue 法、强迫健侧卧位法和 Gufoni 法治疗 60 例向地性眼震型水平半规管良性阵发性位置性眩晕患者,结果显示,强迫健侧卧位法(75.86%, 22/29)和 Gufoni 法(16/18)疗效优于 Barbecue 法(5/13; $P=0.035, 0.006$),而强迫健侧卧位法与 Gufoni 法疗效差异无统计学意义($P=0.400$)。本研究有 8 例患者经 Gufoni 法复位无效后,采用强迫健侧卧位法,1 周后复查均治愈,由于水平半规管良性阵发性位置性眩晕具有一定的自愈率,故难以区分这 8 例患者是强迫健侧卧位法的疗效还是自愈。

Kim 等^[12]的随机对照临床试验纳入 170 例向地性眼震型水平半规管良性阵发性位置性眩晕患者,对于首次治疗失败的患者,采用相同方法再次复位,有效率提高。本研究 87 例患者均行 Gufoni 法,次日复查有效率为 71.26%(62/87);对于仍存在向地性眼震的患者,再次行 Gufoni 法,30 分钟后复查有效率提高至 86.21%(75/87),表明同一方法重复复位可以提高疗效,与既往文献报道相一致^[9, 12]。我们在临床实践中体会到,患者首次就诊手法复位后头晕、恶心、呕吐等前庭刺激症状较严重,反复行滚转试验易增加患者不适感和心理负担,故选择次日评价疗效,对于仍存在向地性眼震的患者,再次行 Gufoni 法;第 2 次就诊手法复位时患者前庭刺激症状较首次减轻,故 30 分钟后评价疗效。Van den Broek 等^[13]总结 Gufoni 法的优缺点:(1)Gufoni 法治疗过程中因向眼震较弱一侧倾倒,眩晕、呕吐等症状较轻微,患者易耐受。(2)Gufoni 法治疗水平半规管良性阵发性位置性眩晕疗效优于相反方向手法

复位^[12, 14-15]和前庭功能抑制药^[16],且相对操作简便,尤其适用于老年人和过度肥胖患者^[14, 16]。(3)但 Gufoni 法也存在弊端,可能转变为其他类型良性阵发性位置性眩晕,但易手法复位^[14, 16]。Kim 等^[15]和 Casani 等^[16]的研究显示,采用 Barbecue 法和 Gufoni 法分别有 1.8%~2.0%和 3.1%~7.0%患者转变为后半规管良性阵发性位置性眩晕。本研究有 4 例(4.60%)转变为后半规管良性阵发性位置性眩晕,予 Epley 法复位后治愈,与既往文献报道一致^[16]。因此,手法复位过程中应注意观察眼震类型,如果眼震类型转变,提示耳石移位的可能,应及时重新评估并对新受累的半规管进行复位。Casani 等^[16]纳入 147 例向地性眼震型水平半规管良性阵发性位置性眩晕患者,采用 Gufoni 法以及 Barbecue 法联合强迫健侧卧位法,结果显示, Gufoni 法有效率为 93.10%(54/58), Barbecue 法联合强迫健侧卧位法有效率为 81.48%(44/54),但差异无统计学意义。本研究 Gufoni 法有效率为 86.21%(75/87),联合强迫健侧卧位法后提高至 95.40%(83/87)。

综上所述, Gufoni 法具有操作简便、有效率较高、前庭刺激症状较轻微等优点,可以作为临床治疗向地性眼震型水平半规管良性阵发性位置性眩晕的有效方法,且多次重复可以提高疗效。

利益冲突 无

参 考 文 献

- [1] Pames LS, Agrawal SK, Atlas J. Diagnosis and management of benign paroxysmal positional vertigo (BPPV) [J]. CMAJ, 2003, 169:681-693.
- [2] Imai T, Ito M, Takeda N, Uno A, Matsunaga T, Sekine K, Kubo T. Natural course of the remission of vertigo in patients with benign paroxysmal positional vertigo [J]. Neurology, 2005, 64: 920-921.
- [3] Escher A, Ruffieux C, Maire R. Efficacy of the barbecue manoeuvre in benign paroxysmal vertigo of the horizontal canal [J]. Eur Arch Otorhinolaryngol, 2007, 264:1239-1241.
- [4] Nuti D, Agus G, Barbieri MT, Passali D. The management of horizontal - canal paroxysmal positional vertigo [J]. Acta Otolaryngol, 1998, 118:455-460.
- [5] Editorial Board of Chinese Journal of Otorhinolaryngology Head and Neck Surgery, Otorhinolaryngology Branch of Chinese Medical Association. Diagnosis basis and curative effect appraisal of benign paroxysmal positional vertigo (2006, Guiyang) [J]. Zhonghua Er Bi Yan Hou Tou Jing Wai Ke Za Zhi, 2007, 42:163-164. [中华耳鼻咽喉头颈外科杂志编辑委员会, 中华医学会耳鼻咽喉科学分会. 良性阵发性位置性眩晕的诊断依据和疗效评估(2006年, 贵阳) [J]. 中华耳鼻咽喉头颈外科杂志, 2007, 42:163-164.]
- [6] Choung YH, Shin YR, Kahng H, Park K, Choi SJ. 'Bow and lean test' to determine the affected ear of horizontal canal benign paroxysmal positional vertigo [J]. Laryngoscope, 2006,

- 116:1776-1781.
- [7] Nuti D, Vannucchi P, Pagnini P. Benign paroxysmal positional vertigo of the horizontal canal: a form of canalolithiasis with variable clinical features[J]. *J Vestib Res*, 1996, 6:173-184.
- [8] McClure JA. Horizontal canal BPV[J]. *J Otolaryngol*, 1985, 14: 30-35.
- [9] Li J, Zou S, Tian S. A prospective randomized controlled study of Li quick repositioning maneuver for geotropic horizontal canal BPPV[J]. *Acta Otolaryngol*, 2018, 138:779-784.
- [10] Casani AP, Vannucci G, Fattori B, Berrettini S. The treatment of horizontal canal positional vertigo: our experience in 66 cases [J]. *Laryngoscope*, 2002, 112:172-178.
- [11] Korres S, Riga MG, Xenellis J, Korres GS, Danielides V. Treatment of the horizontal semicircular canal canalolithiasis: pros and cons of the repositioning maneuvers in a clinical study and critical review of the literature[J]. *Otol Neurotol*, 2011, 32: 1302-1308.
- [12] Kim JS, Oh SY, Lee SH, Kang JH, Kim DU, Jeong SH, Choi KD, Moon IS, Kim BK, Kim HJ. Randomized clinical trial for geotropic horizontal canal benign paroxysmal positional vertigo [J]. *Neurology*, 2012, 78:159-166.
- [13] Van den Broek EM, van der Zaag-Loonen HJ, Bruintjes TD. Systematic review: efficacy of Gufoni maneuver for treatment of lateral canal benign paroxysmal positional vertigo with geotropic nystagmus[J]. *Otolaryngol Head Neck Surg*, 2014, 150:933-938.
- [14] Mandalù M, Pepponi E, Santoro GP, Cambi J, Casani A, Faralli M, Giannoni B, Gufoni M, Marcelli V, Trabalzini F, Vannucchi P, Nuti D. Double-blind randomized trial on the efficacy of the Gufoni maneuver for treatment of lateral canal BPPV [J]. *Laryngoscope*, 2013, 123:1782-1786.
- [15] Kim HA, Park SW, Kim J, Kang BG, Lee J, Han BI, Seok JI, Chung EJ, Kim J, Lee H. Efficacy of mastoid oscillation and the Gufoni maneuver for treating apogeotropic horizontal benign positional vertigo: a randomized controlled study[J]. *J Neurol*, 2017, 264:848-855.
- [16] Casani AP, Nacci A, Dallan I, Panicucci E, Gufoni M, Sellari-Franceschini S. Horizontal semicircular canal benign paroxysmal positional vertigo: effectiveness of two different methods of treatment[J]. *Audiol Neurootol*, 2011, 16:175-184.

(收稿日期:2018-12-27)

International Stroke Conference 2019

Time: February 6–8, 2019

Venue: Hawaii, USA

Website: https://professional.heart.org/professional/EducationMeetings/MeetingsLiveCME/InternationalStrokeConference/UCM_316901_International-Stroke-Conference.jsp

The International Stroke Conference is the world's premier meeting dedicated to the science and treatment of cerebrovascular disease. From forming multiple, life-long collaborations with the best minds in the profession to hearing the very latest big trial results to the exceptional education and science, if you are involved in the stroke medical profession, ISC is essential to your career. This conference features more than 1, 600 compelling presentations in 21 categories that emphasize basic, clinical and translational sciences as they evolve toward a better understanding of stroke pathophysiology with the goal of developing more effective therapies. This conference provides the opportunity to network with more than 4, 500 colleagues in the stroke field from around the world with wide-ranging expertise and experience.

Clinical sessions focus on community risk factors, emergency care, acute neuroimaging, acute endovascular and acute nonendovascular treatment, diagnosis of stroke etiology, cerebral large artery disease, in-hospital treatment, clinical rehabilitation and recovery, and health services, quality improvement, and patient-centered outcomes. Basic science sessions focus on vascular biology in health and disease, basic and preclinical neuroscience of stroke recovery, and experimental mechanisms and models. Further specialized topics include pediatric stroke, intracerebral hemorrhage, nursing, preventive strategies, vascular cognitive impairment, aneurysms, subarachnoid hemorrhage, neurocritical care, vascular malformations, and ongoing clinical trials. Presentations on these topics attract a wide range of healthcare professionals and investigators including adult and pediatric neurologists, neurosurgeons, neuroradiologists and interventional radiologists, physiatrists, emergency medicine specialists, primary care physicians, hospitalists, nurses and nurse practitioners, rehabilitation specialists, physical, occupational, and speech therapists, pharmacists, and basic researchers spanning the fields of cerebrovascular function and disease.