

· 论著 · 头颈 ·

74例前庭神经炎患者临床特点及不同分层医院焦虑抑郁量表和眩晕障碍量表评分差异性分析

李婷婷* 赵媛媛 葛槟华

许昌市立医院神经内科(河南 许昌 461000)

【摘要】目的 归纳总结前庭神经炎患者临床特点,探讨相同治疗方案下不同年龄、性别等组HADS及DHI评分差异性及其与HADS及DHI评分关联。**方法** 回顾分析2019年12月至2024年1月于我院诊断的前庭神经炎并接受激素、营养神经、改善循环、前庭康复锻炼治疗的74例患者,记录患者基本信息、病历资料,追踪患者3周后HADS评分及DHI评分。**结果** (1)74例患者男性46例,女性28例,平均(51.46±14.30)岁,平均就诊时间(3.47±4.52)天;(2)74例患者主要临床表现为眩晕、头晕、呕吐、行走不稳;27例有基础疾病;(3)年龄组两两比较,HADS评分除45-59岁组与60~74岁组($P=1.00$)及60~74岁与75-89岁组($P=0.461$)无差异性,其余两两比较均有差异性($P<0.05$);DHI评分除60~74岁组与75-89岁组($P=1.00$)无差异性,其余两两比较均有差异性($P<0.05$);(4)性别分组HADS与DHI评分均无差异性($P>0.05$);(5)有无基础疾病组HADS及DHI评分均无差异性($P>0.05$);(6)HADS与DHI评分存在线性关系,且呈正相关($r=0.778$, $P<0.05$)。**结论** 经相同方案治疗后,前庭神经炎患者预后不一,年轻人较老年人预后好,且患者焦虑抑郁状态有可能影响患者前庭功能恢复主观评价。

【关键词】 前庭神经炎;预后;HADS;DHI

【中图分类号】 R745.4+4

【文献标识码】 A

DOI:10.3969/j.issn.1009-3257.2026.6.012

The Clinical Characteristics and Difference Analysis of HADS and DHI in Different Stratification of 74 Cases Patients with Vestibular Neuritis

LI Ting-ting*, ZHAO Yuan-yuan, GE Bin-hua.

Department of Neurology, Xuchang Municipal Hospital, Xuchang 461000, Henan Province, China

Abstract: Objective Summarize the clinical characteristics of patients with vestibular neuritis, explore difference analysis of HADS and DHI in different age, gender stratification, and linear relation between the HADS and DHI after the same therapeutic schedule. **Methods** Retrospective analysis the 74 cases patients with vestibular neuritis admitted to hospital from December 2019 to January 2024 who accepted the same therapeutic schedule including steroid, Nalimentary nerve drugs, drugs of improve the circulation and vestibular rehabilitation exercise, recorded basic information and medical history, traced HADS and DHI after three weeks. **Results** (1) There were 46 males, 28 females, aged 51.46±14.30 years; clinic time 3.47±4.52 days. (2) The main clinical manifestations of patients were vertigo, dizzy, nausea and vomiting, walk unsteadily, 27 cases with underlying disease. (3) There was no statistical significance in HADS score between middle age group and young old people group ($P=1.00$), also between young old people group and old people group ($P=0.461$), there were statistical significance between other groups ($P<0.05$); there was no statistical significance in DHI score between young old people group and old people group ($P=1.00$), and statistical significance between other groups ($P<0.05$). (4) There were no statistical significance of HADS score and DHI score in gender stratification ($P>0.05$). (5) There were no statistical significance of HADS score and DHI score with and without underlying disease groups ($P>0.05$). (6) There was linear relation between HADS score and DHI score, and HADS score was positively correlated with DHI score ($r=0.778$, $P<0.05$). **Conclusion** The prognosis of all the patients with vestibular neuritis were different although under same therapeutic schedule, the young people and middle age people were better than old people, and anxiety-depressive state may affect subjective assessment of vestibular rehabilitation of patients.

Keywords: Vestibular Neuritis; Prognosis; HADS; DHI

周围性眩晕或头晕常见疾病中,前庭神经炎(vestibular neuritis, VN)仅次于良性阵发性位置性眩晕、梅尼埃病,位居第三^[1]发病率约为3.5~15/100000^[2],前庭复发少见,约为2%~11%。前庭神经炎患者静态症状改善明显,动态症状恢复缓慢,而半规管瘫则几乎很难恢复至正常。约有50%患者可能发展为慢性头晕、不稳感,生活质量因此遭受影响^[3]。本文回顾性分析74例前庭神经炎患者临床特点及医院焦虑抑郁量表(hospital anxiety and depression scale, HADS)评分及眩晕障碍量表(dizziness handicap inventory, DHI)评分在不同分层的差异性。

1 资料与方法

1.1 一般资料 回顾性分析2019年12月至2024年1月于我院诊断的

前庭神经炎并接受激素、营养神经、改善循环、前庭康复锻炼治疗的74例住院患者,记录患者基本信息、病历资料,追踪患者3周后HADS及DHI评分。

纳入标准: 根据2022年巴拉尼协会前庭疾病分类委员会发布急性单侧前庭病(前庭神经炎)诊断标准:急性或亚急性突发头晕/眩晕,持续性,伴或不伴恶心、呕吐;自发眼震;自发眼震慢相侧前庭功能下降证据;无听力损失、耳科症状;无神经症状;其他疾病不能更好解释。排除标准:颅脑MRI检查提示中枢性病变更相关的眩晕、头晕;患者不能进行激素或不积极行前庭康复,即不能完成激素、改善循环、营养神经、前庭康复治疗相同治疗方案。

1.2 统计学方法 应用SPSS 20.0进行数据统计分析,多组间比较不符合正态分布,首先行Kruskal-Wallis秩和检验, $P<0.05$ 有统

【第一作者】李婷婷,女,主治医师,主要研究方向:神经病学。E-mail: 18337412291@163.com

【通讯作者】李婷婷

计学意义,再进行非参数两两比较;性别及有无基础疾病组不符合正态分布,行非参数独立样本检验, $P<0.05$ 有统计学意义;HADS与DHI评分两组变量行散点图拟合直线,初步探索两变量关系,两变量符合正态分布,再行Pearson积差相关分析。

2 结果

2.1 患者临床特点 74例患者年龄为21~85岁,44岁以下24例,45~59岁29例,60~74岁16例,75~89岁5例,平均(51.46 ± 14.30)岁,其中男性46例(62.16%),女性28例(37.84%),患者就诊时间数小时至数天不等,平均就诊时间(3.47 ± 4.52)天。

74例患者主要临床表现为眩晕、头晕、呕吐、行走不稳;27例(36.48%)患者有基础疾病,其中失眠3例,神经性耳鸣2例,高血压病12例(高血压病合并糖尿病5例,高血压合并冠心病2例,高血压合并腔隙性脑梗死1例,高血压病4例),高脂血症4例,冠心病2例,腔隙性脑梗死3例,糖尿病1例。

2.2 分析结果 74例患者有12例未完成3周后HADS及DHI评估,共62例患者纳入不同分层差异性分析。

年龄组:变量不符合正态分布,行非参数Kruskal-Wallis秩和检验,多组间HADS评分结果: $H=27.582$, $P<0.05$,有统计学意义,继续行非参数独立样本进行两两比较,除外45~59岁组与60~74岁组($P=1.00$)及60~74岁与75~89岁组($P=0.461$)无差异性,其余两两比较均有差异性($P<0.05$)。多组间DHI评分结果: $H=42.033$, $P<0.05$,有统计学意义,继续行两两组比较,除60~74岁组与75~89岁组($P=1.00$)无差异性,其余两两组比较均有差异性($P<0.05$)。见表1。

性别组,变量不符合正态分布,进行非参数Mann-Whitney检验,HADS评分结果: $Z=-1.411$, $P=0.158$,无差异性。DHI评分结果: $Z=-0.530$, $P=0.596$,无差异性。基础疾病组,变量不符合正态分布,进行非参数Mann-Whitney检验,HADS评分结果: $Z=-0.842$, $P=0.4$,无差异性。DHI评分结果: $Z=-1.017$, $P=0.309$ 无差异性。

探索HADS与DHI评分间有无线性关系,进行散点图拟合直线,初步探索两变量关系(图1),两变量服从正态分布,采用Pearson积差相关分析, $r=0.782$, $P<0.05$,HADS与DHI评分呈正相关。

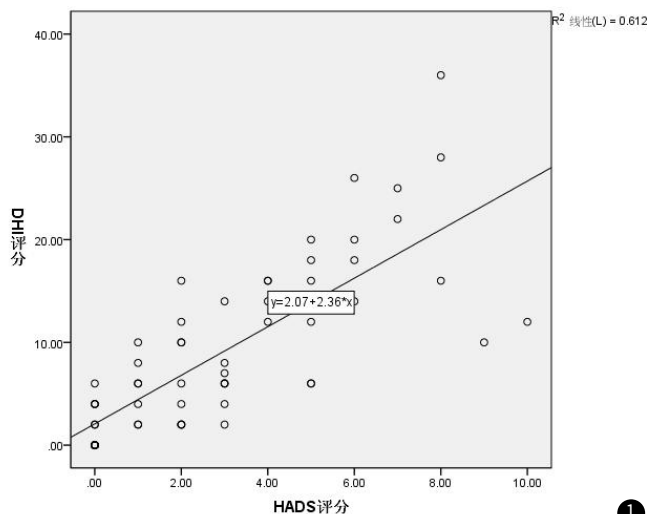


图1 HADS与DHI线性图。

表1 不同年龄分组HADS及DHI评分差异性结果

组别	HADS评分P值	DHI评分P值
44岁以下组~45~59岁组	0.014	0.028
44岁以下组~60~74岁组	0.001	0.000
44岁以下组~75~89岁组	0.000	0.000
45~59岁组~60~74岁组	1.000	0.010
45~59岁组~75~89岁组	0.028	0.003
60~74岁组~75~89岁组	0.461	1.000

3 讨论

前庭神经炎的病因至今仍不明确,但病毒感染、前庭动脉缺血已被普遍认可。Haeu等团队统计分析98例前庭神经炎病人,41.1%有实验室感染证据如CRP、IgM、淋巴细胞比例增高,可反应常见病毒如单纯疱疹病毒、巨细胞病毒或莱姆病等及颅脑MRI脑膜强化证据,该临床研究提供了前庭神经炎感染提供诊治新思路^[5]。近来,新型冠状病毒(coronavirus disease 2019, COVID-19)除引起呼吸道疾病外,也可出现心脏、神经、胃肠道等系统疾病。临床资料显示新冠后前庭症状持续时间明显长,且部分伴有耳蜗损害如听力下降,耳蜗症状有可能与药物耳毒性相关,但病毒相关前庭神经炎机制不明确^[6]。老年病人中发现脑小血管病患者颅脑MRI提示多发高信号灶与前庭神经炎患者呈正比,这进一步印证血管因素参与前庭神经炎发病机制^[7]。除此之外,免疫介导机制相关前庭神经炎近来也有报导^[4]。

前庭神经炎多累及前庭上神经,可能与前庭上神经行程较前庭下神经长,而在炎症及缺血、动脉硬化等情况下,骨性通道下因神经水肿更显狭窄有关。

前庭神经元炎临床表现主要为突然眩晕,可伴恶心、呕吐,行走不稳或倾斜感,症状持续24小时以上,但无耳蜗症状及神经功能症状。约25%病人起病为非旋转性头晕,伴有恶心及不稳感,在数小时至1天时间内可逐渐进展或突然为旋转性头晕,在头动变化后症状更明显,而伴随严重恶心、呕吐,症状在3天后症状可稍缓解。临床症状个体差异性可导致患者就诊时长不同,本研究患者就诊时间为数小时至数天不等,平均为 3.47 ± 4.52 天。

诊断检查包括双温试验(caloric test)、肌源性诱发电位试验(vestibular-evoked myogenic potentials, VEMPs)、视频头脉冲试验(video-head impulse test, v-HIT)等。虽然双温试验仅能评估低频、水平半规管功能状态,但对于诊断前庭神经炎,双温试验可提供最具特点及稳定的检查结果,当前庭下神经炎时该检查结果可为正常^[8]。VEMPs及v-HIT可进行前庭上神经、前庭下神经精准评估且客观性强^[9]。追踪扫视及眼视动检查可发现纠正的补偿扫视、增益降低且为非对称性,有助于前庭神经炎及中枢性疾病鉴别^[10]。当前庭神经炎患者仍需完善颅脑MRI检查排除颅内病变,如前庭神经鞘瘤、脑血管疾病等^[11]。

治疗方法主要为药物治疗如抗病毒药物、激素、改善循环、前庭抑制剂等及前庭康复^[12]。前庭抑制剂包括抗组胺药、胆碱能药物及止吐药(如多潘立酮、甲氧氯普胺)等,可根据患者病情增加剂量以达到控制症状目的,但同时需注意该类药物不良反应,尤其是从事高空、驾驶等相对高危职业人群^[13]。此外,在前庭神经炎急性期前庭抑制剂可有效改善症状、预防并发症或意外,但长期应用可能影响患者中枢代偿。

早期应用激素可缓解前庭神经炎眩晕症状并提高前庭代偿恢复,但现如今,急性期应用激素对于改善前庭神经炎长期预

后已不是全然认可,甚至激素联合抗病毒治疗前庭神经炎也受质疑^[14-15]。但有Meta分析比较激素治疗组与对照组在前庭神经炎急性期及预后确有优势^[16]。Hidayati等团队也发现前庭康复锻炼或联合激素治疗患者DHI可得到显著提高,当然,鉴于激素的不良反应,对伴随特殊疾病病史的病人应平衡利弊^[17]。

患者静态前庭不平衡如自发眼震大多于发病后3个月恢复正常,但动态前庭不平衡如补偿性扫视、振动相关眼震、半规管瘫在30%以上病人中需1年左右时间恢复。而持续性不平衡感可能与不充分周围前庭恢复及中枢代偿、精神及心理因素相关^[19]。平衡训练及步态练习可增强前庭脊髓代偿,静态前庭眼动训练及配合行走练习可有助于恢复姿势稳态及平衡,患者最佳康复时间为一天3次,一次30分钟。

前庭康复治疗旨在通过中枢神经可塑性及前庭代偿改善患者头晕症状、提高凝视及姿势平衡,提高日常生活质量。前庭代偿可分为静止代偿及动态代偿。前庭康复训练对于单侧前庭功能的有效性早已得到证实^[18]。越早行康复锻炼前庭功能恢复程度越好。

前庭神经炎病程长、预后差的危险因素现仍无确定结论。Kim等提出v-HIT的半规管增益可能是患者症状恢复的指标之一,增益<0.5提示预后不良^[20]。Patel等认为前庭神经炎预后不良与半规管轻瘫及v-HIT结果无明显关系^[21]。但也有人提出半规管瘫程度可提示患者静态姿势平衡预后^[23],或动态增益水平可客观提示前庭神经炎预后^[24]。当然,基于预后的客观指标样本量小,是否经得起大样本检验还未可知。

前庭代偿主要取决于前庭眼反射,中枢神经系统对视觉、前庭及情绪的加工、处理,三者存在广泛、交叉联系,前庭代偿及精神心理状态的相互影响在颅脑功能影像学上得以体现^[25]。临床上,前庭功能障碍程度、视觉依赖及紧张、焦虑情绪被观察到与前庭神经炎预后相关^[26],而视觉依赖在老年人患者可能更为明显^[27]。已有证据表明,即使经过药物保守治疗及前庭康复锻炼,精神心理因素可延长患者主观不平衡感及主观头晕感恢复^[28]。Herdman等发现约75-88%单侧前庭功能障碍患者经前庭康复后可有明显改善,而伴有焦虑或抑郁患者无明显改善^[29]。另有研究认为前庭神经炎预后不良与患者焦虑状态、性格及视觉依赖相关^[30]。

Li F等追踪前庭神经炎患者发病6月后高DHI评分很有可能成为持续性姿势-知觉性头晕(persistent postural-perceptual dizziness, PPPD),而性别、年龄与之无明显关系。DHI评分、焦虑水平、规范化前庭康复是发展成为PPPD的独立危险因素^[31]。本研究性别与基础疾病组HADS及DHI评分无差异性。

Jay等团队发现年龄与VOR增益相关及VEMP有关系^[22]。另外, Tseng等发现年轻患者较老年患者预后好,同时精神心理因素在年轻患者中占比较少而且对年轻患者影响小^[33]。不同年龄组DHI及HADS评分有显著差异,且DHI在急性期与HADS有直接关系^[32]。本研究与上述基本一致,44岁以下组、45~59岁组较75~89岁组HADS及DHI评分均有差异性,年轻较老人预后好。HADS与DHI评分呈正相关,患者焦虑抑郁状态有可能影响患者前庭功能恢复的主观评价。

综上所述,前庭神经炎不良预后可能是多因素的,甚至每一个患者都可能都是个案。但之前焦点大多是分析患者急性期临床特点、恢复阶段,但没有更合理的提高患者预后的治疗措施。比如对部分患者残余前庭功能障碍症状、焦虑或抑郁状态及视觉依赖进行细化管理。因此,区别不同病人个体差异性进行个体化治疗方案非常必要^[34]。

参考文献

- [1]Strupp M, Mandalà M, López-Escámez JA. Peripheral vestibular disorders: an update[J]. *Curr Opin Neurol*, 2019, 32(1): 165-173.
- [2]Hegemann SCA, Wenzel A. Diagnosis and treatment of vestibular neuritis/neuronitis or peripheral vestibulopathy (PVP)? Open Questions and Possible Answers[J]. *Otol Neurotol*, 2017, 38(5): 626-631.
- [3]Halmagyi GM, Weber KP, Curthoys IS. Vestibular function after acute vestibular neuritis[J]. *Restor Neurol Neurosci*, 2010, 28(1): 37-46.
- [4]Whitman GT. Dizziness[J]. *Am J Med*, 2018, 131(12): 1431-1437.
- [5]Haeussler SM, Zabaneh SI, Stegemann M, et al. Is vestibular neuropathy rather a neuritis? [J]. *Cureus*, 2022, 14(10): e29959.
- [6]Kaliyappan K, Chen YC, Krishnan Muthaiah VP. Vestibular cochlear manifestations in COVID-19 Cases[J]. *Front Neurol*, 2022, 13: 850337.
- [7]Oussoren FK, Poulsen LNF, Kardux JJ, et al. Cerebral small vessel disease in elderly patients with vestibular neuritis[J]. *Front Neurol*, 2022, 13: 818533.
- [8]Jeong SH, Kim HJ, Kim JS. Vestibular neuritis[J]. *Semin Neurol*, 2013, 33(3): 185-194.
- [9]Kabi B, Tutar H, Gürses E, et al. Concordance of vestibular test batteries in patients with vestibular neuritis[J]. *Turk J Med Sci*, 2022, 52(5): 1639-1645.
- [10]Sharpe JA. Neurophysiology and neuroanatomy of smooth pursuit: lesion studies[J]. *Brain Cogn*, 2008, 68(3): 241-54.
- [11]Park JY, Kim CH. Vestibular schwannoma presenting as acute vertigo mimicking vestibular neuritis[J]. *Case Rep Neurol*, 2022, 14(3): 464-468.
- [12]Bae CH, Na HG, Choi YS. Current diagnosis and treatment of vestibular neuritis: a narrative review[J]. *J Yeungnam Med Sci*, 2022, 39(2): 81-88.
- [13]Baloh RW. Clinical practice. Vestibular neuritis[J]. *N Engl J Med*, 2003, 348(11): 1027-1032.
- [14]Sjögren J, Magnusson M, Tjernström F, et al. Steroids for acute vestibular neuronitis—the earlier the treatment, the better the outcome? [J]. *Otol Neurotol*, 2019, 40(3): 372-374.
- [15]Goudakos JK, Markou KD, Psillas G, et al. Corticosteroids and vestibular exercises in vestibular neuritis. Single-blind randomized clinical trial[J]. *JAMA Otolaryngol Head Neck Surg*. 2014, 140(5): 434-440.
- [16]Bogdanova A, Dlugaiczek J, Heckmann JG, et al. Corticosteroids in patients with vestibular neuritis: An updated meta-analysis[J]. *Acta Neurol Scand*, 2022, 146(5): 429-439.
- [17]Hidayati HB, Imania HAN, Octaviana DS, et al. Vestibular rehabilitation therapy and corticosteroids for vestibular neuritis: a systematic review and meta-analysis of randomized controlled trials[J]. *Medicina (Kaunas)*, 2022, 58(9): 1221.
- [18]McDonnell MN, Hillier SL. Vestibular rehabilitation for unilateral peripheral vestibular dysfunction[J]. *Cochrane Database Syst Rev*, 2015, 1: CD005397.
- [19]Kim JS. When the room is spinning: experience of vestibular neuritis by a neurotologist[J]. *Front Neurol*, 2020, 11: 157.
- [20]Kim HA, Hong JH, Lee H, et al. Otolith dysfunction in vestibular neuritis: recovery pattern and a predictor of symptom recovery[J]. *Neurology*, 2008, 70(6): 449-453.
- [21]Patel M, Arshad Q, Roberts RE, et al. Chronic symptoms after vestibular neuritis and the high-velocity vestibulo-ocular reflex[J]. *Otol Neurotol*, 2016, 37(2): 179-184.
- [22]Jay DR, Cane D, Howe S. Age is a greater influence on small saccades than target size in normal subjects on the horizontal video head impulse test[J]. *Front Neurol*, 2019, 10: 328.
- [23]Fujimoto C, Egami N, Kinoshita M, et al. Postural stability in vestibular neuritis: age, disease duration, and residual vestibular function[J]. *Laryngoscope*, 2014, 124(4): 974-979.
- [24]Esteban-Sanchez J, Martin-Sanz E. Long-term evolution of vestibular compensation, postural control, and perceived disability in a population of patients with vestibular neuritis[J]. *J Clin Med*, 2022, 11(14): 3941.
- [25]Riccelli R, Indovina I, Staab JP, et al. Neuroticism modulates brain visuo-vestibular and anxiety systems during a virtual rollercoaster task[J]. *Hum Brain Mapp*, 2017, 38(2): 715-726.
- [26]Cousins S, Kaski D, Cutfield N, et al. Predictors of clinical recovery from vestibular neuritis: a prospective study[J]. *Ann Clin Transl Neurol*, 2017, 4(5): 340-346.
- [27]Jeng YJ, Young YH. Evolution of vestibular disorders in older adults: from young-old to middle-old to oldest-old[J]. *Geriatr Gerontol Int*, 2020, 20(1): 42-46.
- [28]Herdman SJ. Vestibular rehabilitation[J]. *Curr Opin Neurol*, 2013, 26(1): 96-101.
- [29]Herdman SJ, Hall CD, Maloney B, et al. Variables associated with outcome in patients with bilateral vestibular hypofunction: Preliminary study[J]. *J Vestib Res*, 2015, 25(3-4): 185-94.
- [30]Hoppes CW, Sparto PJ, Whitney SL, et al. Changes in cerebral activation in individuals with and without visual vertigo during optic flow: a functional near-infrared spectroscopy study[J]. *Neuroimage Clin*, 2018, 20: 655-663.
- [31]Li F, Xu J, Liu D, et al. Optimizing vestibular neuritis management with modular strategies[J]. *Front Neurol*, 2023, 14: 1243034.
- [32]Yan T, Zong F, Han X, et al. Vestibular neuritis in patients among different age groups: clinical features and outcomes[J]. *J Am Acad Audiol*, 2020, 31(9): 629-635.
- [33]Tseng CL, Chou CH, Young YH. Aging effect on the ocular vestibular-evoked myogenic potentials[J]. *Otol Neurotol*, 2010, 31(6): 959-963.
- [34]Brodsky JR, Cusick BA, Zhou G. Vestibular neuritis in children and adolescents: clinical features and recovery[J]. *Int J Pediatr Otorhinolaryngol*, 2016, 83: 104-108.

(收稿日期: 2026-03-08)

(校对编辑: 翁佳鸿)

(排版编辑: 刘维嘉)