





防止患者滑落,增加了保护措施,且通过 2 位操作者的熟练配合,有助于复位成功。(3)目前耳石复位仪的应用较为普遍,但机器复位转动幅度大,某些体位亦非生理体位,不适合高龄、虚弱、焦虑恐惧、心脏病患者,人工复位可以根据患者反应随时调整复位的力度和节奏,避免患者出现不良反应。

综上所述,改良 Dix-Hallpike 诱发试验和改良 Epley 复位方法对特殊 PC-BPPV 患者较为安全、有效,临床遇到特殊 PC-BPPV 患者,如无条件进行仪器诊治或患者不能耐受机器复位时,可借鉴以上方法予以诊治。

### [参 考 文 献]

- [1] PAGNINI P, NUTI D, VANNUCCHI P. Benign paroxysmal vertigo of the horizontal canal[J]. *ORL J Otorhinolaryngol Relat Spec*, 1989, 51: 161-170.
- [2] VON BREVERN M, BERTHOLON P, BRANDT T, FIFE T, IMAI T, NUTI D, et al. Benign paroxysmal positional vertigo: diagnostic criteria[J]. *J Vestib Res* 2015, 25: 105-117.
- [3] VON BREVERN M, RADTKE A, LEZIUS F, FELDMANN M, ZIESE T, LEMPERT T, et al. Epidemiology of benign paroxysmal positional vertigo: a population based study[J]. *J Neurol Neurosurg Psychiatry*, 2007, 78: 710-715.
- [4] CELEBISOY N, POLAT F, AKYUREKLI O. Clinical features of benign paroxysmal positional vertigo in Western Turkey[J]. *Eur Neurol*, 2008, 59: 315-319.
- [5] CALDAS M A, GANANÇA C F, GANANÇA F F, GANANÇA M M, CAOVILO H H. Clinical features of benign paroxysmal positional vertigo[J]. *Braz J Otorhinolaryngol*, 2009, 75: 502-506.
- [6] BRONSTEIN M, LEMPERT T. Dizziness: a practical approach to diagnosis and management[M]. Cambridge, UK: Cambridge University Press, 2007: 134-136, 139.
- [7] 于立身,陈太生,于刚,谢溯江,肖瑞春,殷善开,等. 前庭功能检查技术[M]. 西安: 第四军医大学出版社,2013:197.
- [8] EPLEY J M. The canalith repositioning procedure for treatment of benign paroxysmal positional vertigo[J]. *Otolaryngol Head Neck Surg*, 1992, 107: 399-444.
- [9] NUTI D, MASINI M, MANDALA M. Benign paroxysmal positional vertigo and its variants[J]. *Handb Clin Neurol*, 2016, 137: 241-256.
- [10] FALDON M E, BRONSTEIN A M. Head accelerations during particle repositioning manoeuvres[J]. *Audiol Neurotol*, 2008, 13: 345-356.
- [11] REININK H, WEGNER I, STEGEMAN I, GROLMAN W. Rapid systematic review of repeated application of the Epley maneuver for treating posterior BPPV[J]. *Otolaryngol Head Neck Surg*, 2014, 151: 399-406.

[本文编辑] 曾奇峰