抗阻呼吸训练在预防老年脑肿瘤患者术后低氧血症中的应用

Title: The application of anti-obstructive respiratory training in the prevention of postoperative hypoxemia in senile brain tumor patients

作者: 张 燕

空军军医大学西京医院神经外科，陕西 西安 710032

Author(s): Zhang Yan

Department of Neurosurgery,Xijing Hospital,Air Force Military Medical University,Shaanxi Xi'an 710032,China.

摘要: 目的：探讨抗阻呼吸训练对老年脑肿瘤患者术后低氧血症的预防效果。方法：选取2017年3月至2018年9月我院神经外科收治的69例老年脑肿瘤患者临床资料进行研究，根据随机抽样法将所有入组患者分为对照组34例，接受常规呼吸训练；观察组35例，接受常规呼吸训练＋个体化抗阻呼吸训练。采用SPSS 17.0统计软件进行数据分析，脉搏、动脉血氧分压（PaO2）等计量资料符合正态分布的采用（±s）表示，进行t检验；不符合的采用M（QR）表示，进行Mann-Whitney U检验；计量资料采用n（%）表示，行x2检验。结果：两组患者入院时、术前、术毕及术后0.5 h、1 h、1.5 h等不同时间点脉搏搏动次数比较差异均无统计学意义（P＞0.05）。两组患者术后各时间点的PaCO2差异无统计学意义（P＞0.05）；观察组患者术后各时间点的PaO2及SpO2均高于对照组患者，差异有统计学意义（P＜0.05）。观察组患者术后出现低氧血症的发生率明显低于对照组（8.57% vs 32.35%），差异有统计学意义（P＜0.05）。结论：抗阻呼吸训练可有效预防老年脑肿瘤患者术后低氧血症的发生，降低其术后发生率。

Abstract: Objective:To investigate the preventive effect of resistive respiration training on postoperative hypoxemia in elderly patients with brain tumor.Methods:The clinical data of 69 elderly brain tumor patients admitted to the department of neurosurgery oncology in our hospital from March 2017 to September 2018 were selected for the study.According to the random sampling method,all the enrolled patients were divided into 34 control groups and received routine breathing training.In the observation group,35 patients received routine breathing training + individualized anti-respiratory training.SPSS 17.0 statistical software was used for data analysis.Measurement data such as pulse and arterial partial oxygen pressure (PaO2) were in line with normal distribution and represented by (±s),and t test was performed.For nonconformance,M (QR) was adopted,and mann-whitney U test was performed.The measurement data were expressed by n(%) and tested by x2.Results:There was no statistically significant difference in the number of pulse beats at admission,preoperative,postoperative,0.5 h,1 h,1.5 h and other time points between the two groups (P>0.05).There was no significant difference in PaCO2 between the two groups (P>0.05).PaO2 and SpO2 in the observation group were higher than those in the control group at each postoperative time point,with statistically significant differences (P<0.05).The incidence of postoperative hypoxemia in the observation group was significantly lower than that in the control group (8.57% vs 32.35%),and the difference was statistically significant (P<0.05).Conclusion:Anti-obstructive breathing training can effectively prevent the occurrence of postoperative hypoxemia in elderly brain tumor patients and reduce the postoperative incidence.

参考文献/REFERENCES

[1] LIU Guixiu,MA Liwen,AI Yu.Analysis of high-risk factors in the operating room of elderly cancer patients [J].Journal of Practical Clinical Medicine,2008,22(22):136-138. [刘桂秀,马利文,艾宇.老年肿瘤患者的手术室高危因素分析 [J].实用临床医药杂志,2018,22(22):136-138.]

[2] DING Yan,ZHNAG Lingling,LI Fang,et al.Classification and interpretation of WHO pituitary tumors (I) [J].Journal of Clinical and Experimental Pathology,2008,34(11):1181-1184. [丁妍,张玲玲,李芳,等.WHO垂体肿瘤分类解读(一) [J].临床与实验病理学杂志,2018,34(11):1181-1184.]

[3] LIAO Minglang,WEN Chongpei,LIN Zhidong.MRI diagnosis and differential diagnosis of glioma [J].Chinese Journal of Gerontology,2008,38(20):4901-4903. [廖明朗,文宠佩,林志东.脑胶质瘤的MRI诊断及鉴别诊断 [J].中国老年学杂志,2018,38(20):4901-4903.]

[4] ZHANG Jianying,ZHANG Xuehua.Clinical analysis and nursing experience of hypoxemia after general anesthesia [J].Chinese Health Standard Management,2016,7(19):164-165. [张剑英,张雪华.全身麻醉术后低氧血症的临床分析及护理体会 [J].中国卫生标准管理,2016,7(19):164-165.]

[5] Ivan Pavlov,Sofia Medrano,Scott Weingart.Apneic oxygenation reduces the incidence of hypoxemia during emergency intubation:A systematic review and meta-analysis [J].American Journal of Emergency Medicine,2017,35(8): 1184-1189.

[6] LI Fang.Causes and management of perioperative hypoxemia in elderly patients [J].World Journal of Clinical Medicine,2017,11(20):25. [李芳.老年患者围术期低氧血症的发生原因及处理方法 [J].世界临床医学,2017,11(20):25.]

[7] Elisa Bruno,Giulia Maira.Andrea Biondi,et al.Ictal hypoxemia:A systematic review and meta-analysis [J].Seizure:European Journal of Epilepsy,2018,36(09):324-330.

[8] KANG Xiaoyan.Cause analysis and countermeasures of hypoxemia after general anesthesia in anaesthesia resuscitation room [J].Nursing Research,2008,32(14):2310-2311. [康效艳.麻醉复苏室全身麻醉术后病人发生低氧血症的原因分析及对策 [J].护理研究,2018,32(14):2310-2311.]

[9] Robert Tipping,Alex Nicoll.Mechanisms of hypoxaemia and the interpretation of arterial blood gases [J].Surgery (Oxford),2018,19(33):3240-3348.

[10] CHEN Ying,ZHANG Linli,ZHENG Li.Discussion on the effect of respiratory training on pulmonary function of patients with chronic obstructive pulmonary emphysema [J].Basic Medicine BBS,2018,22(21):2928-2929. [陈英,张琳莉,郑丽.呼吸训练对慢性阻塞性肺气肿患者肺功能的影响探讨 [J].基层医学论坛,2018,22(21):2928-2929.]

[11] Keisuke Sekiya,Tasuku Nishihara,Naoki Abe,et al.Carbon monoxide poisoning-induced delayed encephalopathy accompanies decreased in microglial cell numbers:Distinctive pathophysiological features from hypoxemia-induced brain damage [J].Brain Research,2018,30(6):2413-2420.

[12] LIAO Liping,WANG Shuhong.Investigation and analysis of the occurrence of complications in the waking period of patients after general anesthesia [J].Journal of Nursing,2016,31(2):61-63. [廖礼平,王曙红.全身麻醉术后患者苏醒期并发症发生情况调查分析 [J].护理学杂志,2016,31(2):61-63.]

[13] HUANG Jiaru.Ultrasonic evaluation of diaphragm function in normal population [D].Yinchuan:Ningxia Medical University Science,2016,26(9):1-48. [黄佳茹.超声评估正常人群膈肌功能的研究 [D].银川：宁夏医科大学,2016,26(9):1-48.]

[14] WANG Qinglei.Effect of preoperative comprehensive respiratory function training on lung function in children undergoing scoliosis surgery [J].Journal of Clinical Psychosomatic Diseases,2017,23(5):159-160. [王庆雷.术前综合呼吸功能训练对脊柱侧弯手术患儿肺功能的影响 [J].临床心身疾病杂志,2017,23(5):159-160.]

[15] GUO Zhibin,ZHAO Honglin,LI Mei,et al.Effect of simple breathing exercise on perioperative lung function in patients with lung cancer surgery [J].Chinese Journal of Cancer Surgery,2008,10(04):225-227. [郭志斌,赵洪林,李梅，等.简易呼吸功能锻炼对肺癌手术患者围手术期肺功能的影响 [J].中国肿瘤外科杂志,2018,10(04):225-227.]

[16] LAN Yunping,WU Yaqiu,LI Jiajia,et al.Effect of early respiratory training on pulmonary complications in patients with hypoxemia after coronary artery bypass grafting [J].Chinese Rehabilitation Theory and Practice,2017,23(06):709-713. [兰蕴平,吴娅秋,黎嘉嘉，等.早期呼吸训练器治疗对冠脉搭桥术后低氧血症患者肺部并发症的影响 [J].中国康复理论与实践,2017,23(06):709-713.]

[17] MAO Liwei,LU Gan,WANG Lei.Effects of aerobic exercise combined with low-level resistance training on lung function and exercise ability in elderly patients with copd [J].Chinese Journal of Rehabilitation Medicine,2008,33(08):928-933. [毛立伟,陆甘,王磊.有氧运动联合低水平抗阻训练对老年慢性阻塞性肺病患者肺功能与运动能力影响的观察 [J].中国康复医学杂志,2018,33(08):928-933.]

更新日期/Last Update: 1900-01-01