

饮酒对飞行学员高频听力的影响

李大鹏^{1,2} 张红蕾³ 李佳² 郭睿^{1,2}

[摘要] 目的:探讨饮酒对飞行学员听力损失,尤其是高频听力损失的影响。方法:随机选取 517 名男性飞行学员,根据是否饮酒分为饮酒组(84 例)与对照组(433 例)。2 组除饮酒外,对其他因素进行均衡比较。采用队列研究方法,对参试者进行纯音测听检测。结果:饮酒组的左、右耳高频(4~8 kHz)听力损失均高于对照组($P < 0.01$)。饮酒组听力损失检出率亦显著高于对照组($\chi^2 = 16.620, P < 0.01$)。结论:饮酒与飞行学员听力损失具有相关性,尤其影响其高频频段的听力。

[关键词] 飞行学员;饮酒;高频听力损失

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The influence of drinking on high frequency hearing loss of pilot students

LI Da peng^{1,2} ZHANG Hong lei³ LI Jia² GUO Rui^{1,2}

(¹The Air Force General Hospital of Anhui Medical College, Beijing, 100142, China; ²Department of Otolaryngology Head and Neck Surgery, General Hospital of Air Force; ³Department of Otolaryngology, Air Force Aviation Medicine Research Institute Affiliated Hospital)

Corresponding author: GUO Rui, E-mail: gr522@sina.com

Abstract Objective: To evaluate the influence of drinking on hearing loss of pilot students, especially on high frequency hearing loss. **Method:** According to whether drinking, 517 male pilot students were divided into two groups. The balance of all the factors in addition to drinking in both groups was compared. All the students were examined by pure tone audiometry. The statistical data of this research was processed based on a retrospective cohort study. **Result:** The damage of high frequency (4–8 kHz) auditory threshold in left and right ear in drinking group were obviously higher compared with control group ($P < 0.01$). The Morbidity of hearing loss in drinking group was significantly higher compared to control group ($\chi^2 = 16.620, P < 0.01$). **Conclusion:** Drinking is associated with the hearing loss in pilot students and particularly affects the hearing of high frequency spectrum.

Key words pilot students; alcohol drinking; high frequency hearing

目前全球有 20 亿饮酒者,其中 7 630 万人存在饮酒相关疾患^[1]。国内外已有研究表明,饮酒与听力损失存有一定的相关性^[2-3]。在飞行员人群中饮酒现象比较普遍,有调查研究表明我国某地区飞行员的饮酒率高达 95.83%^[4]。听力健康对于飞行员极为重要,在招飞体检中有相当比例的人员因听力损失而被淘汰。本研究通过对某航空大学 517 名飞行学员进行调查研究,探讨其听力变化情况与饮酒的关系。

1 对象与方法

1.1 研究对象

随机选取某航空大学学生 517 名,并参与调查问卷,均为男性,年龄 20~26 岁,均有相同的生活和训练环境。其中将 84 名(16.25%)饮酒者设为饮酒组,余 433 名(83.75%)不饮酒者作为对照组。

饮酒的标准参照中国疾病预防控制中心关于饮酒的规定^[5]:无论是啤酒、白酒、黄酒或葡萄酒等,只要平均每周饮酒 1 次,连续饮用 1 年以上,即可定为饮酒。研究对象均排除头部外伤史、耳部疾病史、家族性耳聋史以及耳毒性药物使用史。

1.2 方法

采用丹麦产 MSA84-1 听力检测仪。在隔声听力室中对受检者进行听力学检测,记录受试者左右耳 0.5、1、2、3、4、6、8 kHz 各频率的纯音气导听阈数值。任一频段听阈位移大于 25 dB(A)定义为听力损失。

根据研究要求设计《飞行学员基本情况调查问卷》,调查内容包括一般情况、个人生活史、头部外伤史、耳部疾病史、家族性耳聋史以及耳毒性药物使用史等。其中个人生活史中包括:是否饮酒、每次饮酒量及酒龄等。

1.3 统计学处理

分析飞行学员纯音测听检测结果,应用 SPSS 19.0 统计软件进行相关的统计学分析,饮酒组与对

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¹安徽医科大学空军临床学院(北京,100142)

²空军总医院耳鼻咽喉头颈外科

³空军航空医学研究所附属医院耳鼻咽喉科

通信作者:郭睿, E-mail: gr522@sina.com

照组组间计量资料比较采用两独立样本 t 检验, 2 组间听力损失检出率采用 Pearson χ^2 检验。

2 结果

饮酒组和对照组在各频段的听力损失见图 1~2 所示。2 组左、右耳在 0.5~3.0 kHz 频段听力损失差异无统计学意义 ($P > 0.05$)。在 4 kHz 频段饮酒组左、右耳 [(27.87 ± 15.20) dB, (28.80 ± 15.35) dB] 听阈损失均显著高于对照组 [(22.17 ± 12.05) dB, (21.78 ± 11.95) dB], 差异有统计学意义 ($P < 0.01$)。在 6 kHz 频段饮酒组左、右耳 [(24.52 ± 13.33) dB, (24.95 ± 13.62) dB], 在 8 kHz 频段饮酒组左、右耳 [(22.66 ± 11.02) dB, (23.26 ± 11.14) dB] 听阈损失均高于对照组, 差异有统计学意义 ($P < 0.01$)。饮酒组中 14 例 (16.67%) 听力损失, 对照组中 20 例 (4.62%) 听力损失, 2 组比较差异有统计学意义 ($\chi^2 = 16.620$, $P < 0.01$)。

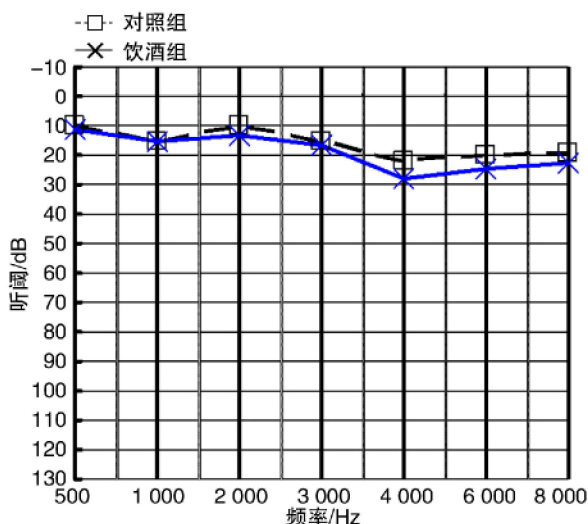


图 1 2 组左耳听阈位移情况比较

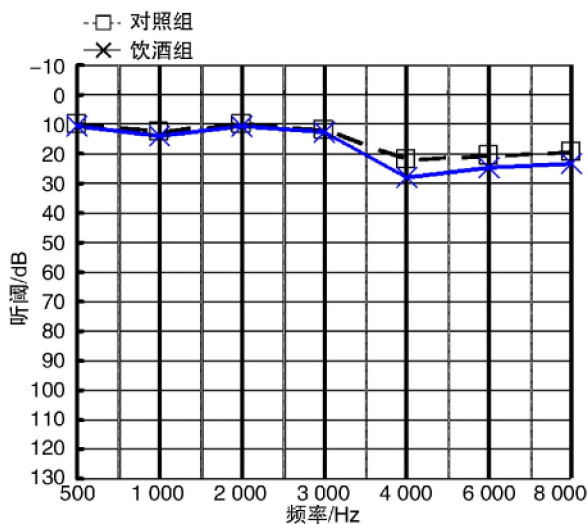


图 2 2 组右耳听阈位移情况比较

3 讨论

目前饮酒在全世界范围内都是一种普遍现象, 大量研究证实饮酒可以对人的机体产生危害。在我国飞行员人群中饮酒现象亦十分普遍, 韩桐师等^[6]对 92 名高性能战斗机飞行员进行调查, 发现该人群中的有害饮酒率达 69.6%; 王真真等^[7]对 1433 名航空兵部队官兵进行研究, 发现受调查人员的饮酒率达 79.06%。本研究中 517 名飞行学员的饮酒率为 16.25%, 低于上述研究, 这可能与调查的人群有关, 本次调查对象均为航空大学的在校飞行学员。本研究仅初步调研了我国飞行学员人群的饮酒现状。

目前许多研究表明, 饮酒与听力损失存在相关性^[8-10]。本研究饮酒组平均高频听力位移大于对照组, 差异有统计学意义 ($P < 0.01$); 而低频听力位移未见明显差异, 提示饮酒对听力造成的影响首先从高频频率开始。亦有个别研究表明饮酒对听力造成的影响尚不明确, Curhan 等^[11]研究表明少量饮酒对听力损失无显著影响。

本研究通过队列研究比较相同生活和训练环境下饮酒飞行学员和不饮酒飞行学员之间听力损失的发生率, 结果显示饮酒飞行学员的听力损失发生率显著高于不饮酒飞行学员, 提示饮酒可以提高听力损失的发生率。饮酒对听力造成影响机制至今尚不明确, 目前认为酒精可损伤前庭、内耳的血管, 影响微循环以及听神经等^[12]。亦有个别研究提示饮酒、维生素 B12 的吸收与听力损失三者具有复杂的联系^[11]。

本研究初步证明了饮酒人群的听力损失检出率较正常人群高, 提示饮酒对人听力造成的损害首先从高频频段开始, 下一步我们将扩大样本量, 进行前瞻性研究, 进一步明确饮酒对听力造成影响的机制, 为招飞体检标准的修改提供参考, 为保护飞行员的听力健康提供理论依据。

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内镜手术为主的综合治疗慢性鼻-鼻窦炎伴 支气管哮喘患者的生存质量

皇甫辉¹

[摘要] 目的: 探讨以鼻窦内镜手术为主的综合治疗对慢性鼻-鼻窦炎伴支气管哮喘患者的疗效。方法: 32 例接受鼻内镜手术治疗慢性鼻-鼻窦炎伴支气管哮喘患者, 围手术期予以糖皮质激素吸入、喷鼻, 鼻腔冲洗等治疗, 术后随访 3 年对临床疗效进行评估。结果: 32 例经鼻窦内镜手术治疗后慢性鼻-鼻窦炎病情完全控制 19 例、病情部分控制 9 例、病情未控制 4 例, 有效率为 87.5%; 哮喘症状完全控制由术前 2 例变为 9 例 ($P < 0.01$)。结论: 慢性鼻-鼻窦炎鼻息肉伴支气管哮喘经鼻窦内镜手术为主的综合治疗后, 能有效控制哮喘症状的发生。

[关键词] 鼻窦炎; 鼻息肉; 哮喘; 内镜检查; 糖皮质激素

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Effects of endoscopic surgery on patients with chronic rhinosinusitis with bronchial asthma

HUANG FU Hui

(Department of Otolaryngology-Head and Neck Surgery, No. 1 Hospital, Shanxi Medical University, Shanxi Key Laboratory of Otorhinolaryngology Head and Neck Cancer, Key Institute and Laboratory of Otolaryngology affiliated with Shanxi Province, Taiyuan, 030001, China)

Corresponding author: HUANG FU Hui, E-mail: 13934518228@163.com

Abstract Objective: To investigate the efficacy of endoscopic sinus surgery (ESS)-based multidisciplinary therapy for patients with chronic rhinosinusitis (CRS), nasal polyps and bronchial asthma. **Method:** The study included 32 patients with CRS, nasal polyps and bronchial asthma who received ESS, besides surgery, who also used glucocorticoid inhalation, nasal spray and nasal irrigation perioperatively. The evaluation of the treatment was performed 3 years post after ESS. **Result:** In the 32 cases treated with ESS, 19 cases were cured, 9 cases were improved, 4 cases were inefficient by the treatment. The cure rate was 87.5%. The asthma symptoms were improved in 9 patients ($P < 0.01$), compared to 2 before surgery. The numbers of patients with improved symptoms were increased from 2 before the surgery to 9 after the surgery. **Conclusion:** As the main treatment, endoscopic sinus surgery was effective on CRS with asthma.

Key words sinusitis; nasal polyps; asthma; endoscopy; corticosteroids

¹山西医科大学第一医院耳鼻咽喉-头颈外科 耳鼻咽喉头颈肿瘤山西省重点实验室 山西医科大学耳鼻咽喉研究所 (太原, 030001)

通信作者: 皇甫辉, E-mail: 13934518228@163.com