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鼻内镜下手术结合术后鼻窦冲洗治疗变应性真菌性鼻窦炎的临床研究

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摘要 目的:研究鼻内镜下手术结合术后鼻窦冲洗治疗变应性真菌性鼻窦炎的临床疗效。**方法:**选取 2010 年 3 月到 2013 年 3 月我院收治的变应性真菌性鼻窦炎患者 67 例为研究对象,对其临床资料进行回顾分析,所有患者均给予鼻内镜下手术结合术后鼻窦冲洗治疗,术后随访患者 1 年。另选取健康者 50 例为对照组,应用视觉模拟量表(VAS)评价患者术前术后主观感受,应用鼻内镜和鼻腔纤毛功能评价患者术前术后客观感受,并应用生活质量量表(SF-36)评价患者的生活质量。**结果:**患者术后 VAS 评分为 (18.5 ± 1.3) 分显著优于术前的 (29.3 ± 0.2) 分,与术前比较差异具有统计学意义($t=11.026, P=0.018$);术后鼻内镜总分为 (4.1 ± 0.2) 分显著优于手术前,与手术前比较差异具有统计学意义($t=9.037, P=0.027$);术后 1 年鼻纤毛传输速度 (6.9 ± 0.3) mm/min,与对照组比较差异无统计学意义($t=3.984, P=0.092$);术后 1 年 SF-36 评分为 (649.6 ± 23.2) 分,与对照组比较差异无统计学意义($t=4.018, P=0.096$)。**结论:**鼻内镜下手术结合术后鼻窦冲洗治疗变应性真菌性鼻窦炎具有较好的临床疗效,能显著改善患者的症状,提高患者的生活质量。

关键词:鼻内镜;鼻窦冲洗;变应性真菌性鼻窦炎

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The Clinical Research of Endoscopic Surgery Combined with Postoperative Sinus Rinse in Treatment of Allergic Fungal Sinusitis

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ABSTRACT Objective: To study the clinical efficacy of endoscopic surgery combined with postoperative sinus rinse in treatment of allergic fungal sinusitis. **Methods:** 67 cases of patients with allergic fungal sinusitis who were treated in our hospital from March 2010 to March 2013 were selected, and the clinical data of them were retrospectively analyzed. All patients were treated with endoscopic sinus surgery combined with postoperative sinus rinse, and patients were followed up for 1 year postoperative. 50 cases of healthy people were selected as the control group, the subjective preoperative and postoperative feelings of patients were evaluated by visual analogue scale (VAS), the objective preoperative and postoperative feelings of patients were evaluated by functional endoscopic sinus and nasal cilia, and the quality of life of patients were evaluated by quality of life questionnaire (SF-36). **Results:** The postoperative VAS scores were (18.5 ± 1.3) points, significantly better than (29.3 ± 0.2) points of preoperative scores ($t=11.026, P=0.018$); The postoperative endoscopic score were (4.1 ± 0.2) points, significantly better than preoperative ones, the difference was statistically significant ($t=9.037, P=0.027$); The nasal mucociliary transporting velocity after 1 year was (6.9 ± 0.3) mm/min, and the difference was not statistically significant when compared with the control group ($t=3.984, P=0.092$); the SF-36 scores after 1 year were (649.6 ± 23.2) points, with no statistically significant difference when compared with that in the control group ($t=4.018, P=0.096$). **Conclusion:** Endoscopic surgery combined with postoperative sinus rinse in treatment of allergic fungal sinusitis has better clinical efficacy, can significantly improve the symptoms, and improve the life quality of patients.

Key words: Endoscopic; Sinus rinse; Allergic fungal sinusitis

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前言

据统计,几乎所有的慢性鼻窦炎的患者均存在真菌感染,

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其鼻粘膜中可以检测出真菌,推测真菌和鼻窦炎的发病有一定关系^[1]。由真菌感染导致特异性鼻窦炎是慢性鼻窦炎的一种,属于非侵袭性的真菌性鼻窦炎。该类型鼻窦炎的发病机制和治疗均和其他类型的鼻窦炎不同,需要彻底治疗,否则会出现病情反复发作,严重者会侵及眼眶,甚至是颅内^[2,3]。单纯的手术治疗、激素或免疫治疗效果均不理想,因此需要进行综合性的

治疗^[4]。本研究旨在分析鼻内镜下手术结合术后鼻窦冲洗治疗变应性真菌性鼻窦炎的临床疗效,现将结果报道如下。

1 资料与方法

1.1 一般资料

选取2010年3月到2013年3月我院收治的变应性真菌性鼻窦炎患者67例为研究对象,所有患者均符合变应性真菌性鼻窦炎的诊断标准^[5],且术后经病理证实为曲菌感染。排除标准:(1)排除全身各系统的慢性疾病、高血压、心脏病以及肾病等严重疾病者。单侧鼻窦者58例,双侧鼻窦者9例;男性42例,女性25例;年龄20-50岁,平均年龄(37.3±0.5)岁。另选取健康体检者50例为对照组,男性31例,女性19例,年龄20-51岁,平均年龄(37.2±0.8)岁,两组入选者的年龄、性别比较均无显著差异($P>0.05$),具有可比性。研究经伦理委员会批准,所有入选者均知情同意并签订知情同意书。

1.2 治疗方法

手术前3天给予患者泼尼松(生产厂家:阿特维斯(佛山)制药有限公司,生产批号:20081124)6片/天,晨起顿服。根据CT扫描显示病变的范围,然后选择手术时需要的麻醉方式。然后应用鼻内镜将受累的鼻窦开放,可以见到粘稠分泌物,彻底的清除其分泌物,清除时尽可能保留鼻窦的鼻腔粘膜。手术后将鼻腔内填塞纱条,48小时以后取出。第1周在鼻内镜的直视下将5%的碳酸氢钠注射液(生产厂家:安阳九州药业有限责任公司,生产批号:20070918)冲洗鼻窦,1次/每天。鼻腔的纱布取出以后患者自己用鼻腔冲洗器冲洗生理盐水于鼻腔中,每

天1次,冲洗8周。手术后1周内静脉滴注抗生素防止感染,并口服泼尼松6片/天,然后逐渐减量。应用曲安奈德(生产厂家:江西珍视明药业有限公司,生产批号:20090079)喷鼻,直到鼻腔粘膜完全上皮化。随访患者1年。

1.3 评价指标

(1)应用视觉模拟评分法(VAS)^[6]评价患者术前术后主观感受,其分值越高表示越严重;(2)鼻内镜评估^[7]:应用Lund-Mackay的评分方法,主要包括水肿、息肉、鼻漏、结痂、瘢痕等,0-2分为计分,其分值越高表示越严重;(3)鼻腔纤毛功能^[8]:应用碳粉作为标记物,采用计时器记录时间,并在内镜下测得纤毛运动的距离,根据距离和时间计算纤毛传输速度;(4)生活质量量表(SF-36)^[9,10]评价患者的生活质量,分值越高表示其健康情况越好。

1.4 统计学方法

全部数据均在SPSS17.0软件上统计,其中计量资料用($\bar{X} \pm S$)表示,应用t检验,计数资料应用卡方检验,检验标准以 $P<0.05$ 表示有统计学意义。

2 结果

2.1 研究组手术前后VAS评分和鼻内镜评分比较

患者术后VAS评分为(18.5±1.3)分显著优于术前的(29.3±0.2)分,与术前比较差异具有统计学意义($t=11.026$, $P=0.018$);术后鼻内镜总分为(4.1±0.2)分显著优于手术前,与手术前比较差异具有统计学意义($t=9.037$, $P=0.027$)。

表1 手术前后患者VAS评分和鼻内镜评分比较(分, $\bar{x} \pm S$)

Table 1 Comparison of the postoperative and preoperative VAS scores and endoscopic scores (points, $\bar{x} \pm S$)

时间 Time	VAS 评分 VAS scores	鼻内镜总分 Endoscopic scores
手术前 Preoperative	29.3±0.2	6.1±0.4
手术后 Postoperative	18.5±1.3	4.1±0.2
t	11.026	9.037
P	0.018	0.027

2.2 两组鼻纤毛传输速度和SF-36评分比较

由表2可知,研究组术后1年鼻纤毛传输速度(6.9±0.3)mm/min,和对照组比较差异无统计学意义($t=3.984$, $P=0.092$);

术后1年SF-36评分为(649.6±23.2)分,与对照组比较差异无统计学意义($t=4.018$, $P=0.096$)。

表2 两组鼻纤毛传输速度和SF-36评分比较($\bar{x} \pm S$)

Table 2 Comparison of the nasal mucociliary transporting velocity and SF-36 scores between two groups ($\bar{x} \pm S$)

组别 Groups	鼻纤毛传输速度(mm/min) The nasal mucociliary transporting velocity	SF-36(分)(points)
对照组 Control group	7.0±0.3	654.2±12.7
研究组 Study group	6.9±0.3	649.6±23.2
t	3.984	4.018
P	0.092	0.096

3 讨论

变应性真菌性鼻窦炎是一种于特定的个体发生的免疫失调疾病,其发病机制较复杂,目前尚不清楚^[11]。许多学者认为,

变应性真菌性鼻窦炎和真菌感染无关,而是因真菌作为抗原和特应性的个体的鼻粘膜接触以后导致的变态反应性的疾病,是一种 I 型的变态反应和 III 型变态反应共同的结果^[12]。在鼻窦的分泌物以及粘膜中,可以看到大量的嗜酸性的细胞浸润。其嗜酸性细胞在该病的发生中起到重要的作用,该细胞释放出来的细胞因子、炎症递质可以引起粘膜的增生和水肿,致使纤毛的清除能力降低,导致鼻窦口的堵塞,最终引起鼻窦的气流受阻,此时形成一个缺氧的环境,更加有利于真菌的生长和繁殖,形成一个恶性循环,导致病情加重,最终导致鼻窦发生变应性真菌性鼻窦炎^[13,14]。

彻底的清除变应性的变应原是治疗变应性真菌性的鼻窦炎,也就是清除其鼻腔和鼻窦内的真菌,并且保证其术后的鼻腔和鼻窦长期的引流通畅,创造一个不利于真菌生存的环境,进而抑制鼻窦和鼻腔的变态反应的发生^[15-17]。大量研究发现,鼻内镜下手术结合术后的抗感染治疗综合方法可以有效的治疗该病,能彻底清除变应原,减少其复发^[18]。本研究在彻底清除真菌的同时,更加注重鼻窦的冲洗,可以彻底清除因鼻窦鼻腔的骨性分离、出血和粘膜水肿带来的较小的难清除的真菌团块,且在鼻内镜的引导下,更加容易发现并且精确的冲洗到残留的细小的真菌。据研究^[19],真菌的繁殖最适合的 pH 值为 4-6,本研究选取 5% 的碳酸氢钠为冲洗液,能使鼻腔的 pH 值增加,进而不利于真菌的生长。手术治疗以后给予抗感染治疗,可以改善患者的特应性症状,进而减轻其疾病症状。本研究发现,术后 VAS 评分为 (18.5 ± 1.3) 分显著优于术前的 (29.3 ± 0.2) 分,术后鼻内镜总分为 (4.1 ± 0.2) 分显著优于手术前,和其他研究结果具有一致性^[20],进一步说明鼻内镜下手术结合术后鼻窦冲洗能显著改善患者的临床症状。且研究还发现,术后 1 年鼻纤毛传输速度 (6.9 ± 0.3) mm/min,术后 1 年 SF-36 评分为 (649.6 ± 23.2) 分,均和对照组无显著差异,提示鼻内镜下手术结合术后鼻窦冲洗对变应性真菌性鼻窦炎具有较好的疗效,能显著改善患者的纤毛传输速度和提高患者生活质量,与健康者相对。

综上所述,变应性真菌性鼻窦炎是一种常见疾病,应用鼻内镜下手术结合术后鼻窦冲洗治疗变应性真菌性鼻窦炎具有较好的临床疗效,能显著改善患者的主观感受和客观情况,提高患者的生活质量。

参考文献(References)

- [1] 樊治军. 内窥镜手术结合中药治疗鼻窦炎疗效分析[J]. 辽宁医学院学报, 2013, 34(5): 21-23
Fan Zhi-jun. Effect analysis of Endoscopic operation combined with traditional Chinese medicine treatment of sinusitis [J]. Journal of Liaoning Medical University, 2013, 34(5): 21-23
- [2] Won EJ, Shin JH, Lim SC, et al. Molecular Identification of Schizophyllum commune as a Cause of Allergic Fungal Sinusitis[J]. Ann Lab Med, 2012, 32(05): 375-379
- [3] Yamamoto N, Bibby K, Qian J, et al. Particle-size distributions and seasonal diversity of allergenic and pathogenic fungi in outdoor air[J]. ISME J, 2012, 06(10): 1801-1811
- [4] Casadevall A, Pirofski LA. Immunoglobulins in defense, pathogenesis, and therapy of fungal diseases. [J]. Cell Host Microbe, 2012, 11(05): 447-456
- [5] Mary S, Doellman, Gregory R, et al. Immunotherapy in allergic fungal sinusitis: The controversy continues. A recent review of literature [J]. Allergy Rhinol (Providence), 2013, 04(01): e32-e35
- [6] Joshua L, Kennedy, Larry Borish. Chronic sinusitis pathophysiology: The role of allergy [J]. Am J Rhinol Allergy, 2013, 27(05): 367-371
- [7] Haleem Khan AA, Mohan Karuppaiyl S. Mohan Karuppaiyl. Fungal pollution of indoor environments and its management [J]. Saudi J Biol Sci, 2012, 19(04): 405-426
- [9] Singhal N, Raghubanshi G, Handa U, et al. Fine Needle Aspiration Cytology: A Useful Technique for Diagnosis of Invasive Fungal Rhinosinusitis [J]. Head Neck Pathol, 2013, 07(03): 236-240
- [10] Ian R. Gorovoy, Mia Kazanjian, et al. Fungal rhinosinusitis and imaging modalities [J]. Saudi J Ophthalmol, 2012, 26(04): 419-426
- [11] Lee SH, Cho WY, Cho JY. Submucosal Endoscopy, a New Era of Pure Natural Orifice Transluminal Endoscopic Surgery (NOTES) [J]. Clin Endosc, 2012, 45(01): 4-10
- [12] Abbaszadegan A, Nabavizadeh M, Hoseini Yekani A, et al. Comparison of Endodontic Treatment Results Yielded from Using Normal Saline with IKI Final Rinse or NaOCl Irrigation: A 30-Month Follow-up Study [J]. Iran Endod J, 2013, 08(04): 171-176
- [13] Lee SY, Yoon SH, Song WJ, et al. Influence of Chronic Sinusitis and Nasal Polyp on the Lower Airway of Subjects Without Lower Airway Diseases [J]. Allergy Asthma Immunol Res, 2014, 06(04): 310-315
- [14] Tang J, Liu S, Zhang L, et al. Correlation analysis of prognostic and pathological features of patients with chronic sinusitis and nasal polyps following endoscopic surgery [J]. Exp Ther Med, 2013, 06(01): 167-171
- [15] Singh R, Hazarika P, Nayak DR, et al. A Comparison of Microdebrider Assisted Endoscopic Sinus Surgery and Conventional Endoscopic Sinus Surgery for Nasal Polypi [J]. Indian J Otolaryngol Head Neck Surg, 2013, 65(03): 193-196
- [16] Singh R, Hazarika P, Nayak DR. Intensive Care Unit nosocomial sinusitis at the Rasoul Akram Hospital: Tehran, Iran, 2007-2008 [J]. Iran J Microbiol, 2012, 04(03): 146-149
- [17] Al-Hashel JY, Ahmed SF, Alroughani R, et al. Migraine misdiagnosis as a sinusitis, a delay that can last for many years [J]. J Headache Pain, 2013, 14(01): 97
- [18] Noorian V, Motaghi A. Assessment of the Diagnostic Accuracy of Limited CT Scan of Paranasal Sinuses in the Identification of Sinusitis [J]. Iran Red Crescent Med J, 2012, 14(11): 709-712
- [19] Feng CH, Miller MD, Simon RA. The united allergic airway: Connections between allergic rhinitis, asthma, and chronic sinusitis [J]. Am J Rhinol Allergy, 2012, 26(03): 187-190
- [20] Ateev Mehrotra, Suzanne Paone, G. Daniel Martich. A Comparison of Care at eVisits and Physician Office Visits for Sinusitis and Urinary Tract Infections [J]. JAMA Intern Med, 2013, 173(01): 72-74