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鼻窦内镜术治疗鼻窦炎合并鼻息肉的疗效及对鼻腔通气和嗅觉功能的影响

罗 敏 段金芳 孙 刚 李玉洁 陈 红

(安徽医科大学附属巢湖医院耳鼻咽喉头颈外科 安徽 巢湖 238000)

摘要 目的:探讨鼻窦内镜术治疗鼻窦炎合并鼻息肉的临床疗效及对鼻腔通气和嗅觉功能的影响。**方法:**选取 2014 年 1 月至 2016 年 6 月我院收治的鼻窦炎合并鼻息肉患者 80 例。根据随机数字表法分为观察组和对照组,各 40 例。对照组给予传统摘除术治疗,观察组则行鼻窦内镜术治疗。比较两组临床疗效以及治疗前、治疗后 3 个月症状评分、鼻气道总阻力、嗅觉功能评分。**结果:**观察组治疗总有效率为 95.00%,显著高于对照组的 77.50%($P<0.05$)。治疗前两组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分比较无统计学差异($P>0.05$),治疗后 3 个月两组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分均低于治疗前,且观察组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分低于对照组($P<0.05$)。治疗前两组患者鼻气道总阻力、嗅觉功能评分比较无统计学差异($P>0.05$),治疗后 3 个月两组患者鼻气道总阻力、嗅觉功能评分均低于治疗前,且观察组低于对照组(均 $P<0.05$)。**结论:**鼻窦内镜术治疗鼻窦炎合并鼻息肉有利于改善患者临床症状,促进患者嗅觉功能以及鼻腔通气的恢复,是治疗鼻窦炎合并鼻息肉的有效方法。

关键词:鼻窦炎;鼻息肉;鼻窦内镜术;嗅觉功能;鼻腔通气

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Effect of Endoscopic Sinus Surgery in the Treatment of Sinusitis and Nasal Polyps and Its Effect on Nasal Ventilation and Olfactory Function

LUO Min, DUAN Jin-fang, SUN Gang, LI Yu-jie, CHEN Hong

(Department of Otolaryngology Head & Neck Surgery, The Affiliated Chaohu Hospital of Anhui Medical University, Chaohu, Anhui, 238000, China)

ABSTRACT Objective: To investigate the clinical effect of endoscopic sinus surgery in the treatment of sinusitis and nasal polyps and its effect on nasal ventilation and olfactory function. **Methods:** 80 patients with sinusitis and nasal polyps were selected in our hospital from January 2014 to June 2016, who were randomly divided into observation group and control group, each group of 40 cases. The control group was treated with traditional enucleation, while the observation group was treated with endoscopic sinus surgery. The clinical efficacy, the symptom scores, nasal airway resistance and olfactory function score before treatment and 3 months after treatment were compared between the two groups. **Results:** The total effective rate of the observation group was 95.00%, which was significantly higher than that of the control group 77.50% ($P<0.05$). There was no significant difference in nasal congestion, purulent nasal discharge, olfactory dysfunction, pain and total symptom score between the two groups before treatment ($P>0.05$), nasal congestion, purulent nasal discharge, olfactory dysfunction, pain and total symptom score between the two groups at 3 months after treatment were lower than before treatment, and nasal pus, smell disorder, pain and total symptom scores of the patients in the observation group were lower than the control group ($P<0.05$). There was no significant difference in nasal airway resistance and olfactory function score between the two groups before treatment and 3 months after treatment ($P>0.05$), nasal airway resistance, olfactory function score of patients in two groups at 3 months after treatment were lower than before treatment, and the observation group was lower than that of the control group ($P<0.05$). **Conclusion:** Endoscopic sinus surgery for sinusitis and nasal polyps is helpful to improve the clinical symptoms, promote the olfactory function and recovery of nasal ventilation, which is an effective method for treatment of sinusitis and nasal polyps.

Key words: Sinusitis; Nasal polyps; Endoscopic sinus surgery; Olfactory function; Nasal ventilation

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前言

鼻窦炎合并鼻息肉属于耳鼻咽喉科临床上较为常见的疾病之一,患者以头痛、嗅觉减退以及流脓涕等为主要临床表现,

作者简介:罗敏(1981-),男,硕士,主治医师,从事变应性鼻炎方面的研究,E-mail:nbkigy@163.com

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严重影响患者的日常生活^[1]。既往,对于鼻窦炎合并鼻息肉临床上主要是采用传统摘除术进行治疗,但由于鼻腔、鼻窦均由狭窄的空洞、管腔以及间隙构成,具有复杂的解剖结构,导致传统摘除术治疗效果不理想^[2]。而近年来随着鼻内镜技术的不断完善,鼻内镜开始被应用于临床上治疗鼻窦炎,与传统摘除术相比,鼻内镜手术视野清晰、对患者创伤较小,可以取得较为明显的效果^[3]。但目前关于鼻窦内镜术对患者鼻腔通气以及对嗅觉

功能影响的相关研究报道较少。鉴于此,笔者进行了对照研究,旨在为临床治疗提供方案选择,现作如下报道。

1 资料和方法

1.1 临床资料

选取 2014 年 1 月至 2016 年 6 月我院收治的鼻窦炎合并鼻息肉患者 80 例,纳入标准:所有患者均符合海口会议制定的慢性鼻窦炎诊断标准^[4],同时经鼻镜确诊为鼻息肉。排除标准:(1)既往有鼻内镜手术史患者;(2)存在精神障碍疾病患者;(3)伴有先天性失嗅等疾病患者。根据随机数字表法分为观察组和对照组,各 40 例。其中观察组男 20 例,女 20 例,年龄 35~65 岁,平均年龄(55.3 ± 4.2)岁;病程 6 个月~31 年,平均病程(11.4 ± 1.5)年;鼻窦炎分型分期:I 型 1 期 4 例,I 型 2 期 5 例,I 型 3 期 3 例,II 型 1 期 8 例,II 型 2 期 14 例,II 型 3 期 2 例,III 型 4 例。对照组男 18 例,女 22 例,年龄 36~66 岁,平均年龄(55.5 ± 4.3)岁;病程 8 个月~30 年,平均病程(11.6 ± 1.6)年;鼻窦炎分型分期:I 型 1 期 5 例,I 型 2 期 4 例,I 型 3 期 4 例,II 型 1 期 7 例,II 型 2 期 13 例,II 型 3 期 3 例,III 型 4 例。两组患者的年龄、性别、疾病分型分期和病程等资料比较无统计学差异($P > 0.05$),存在可比性。本研究所有患者均签署了知情同意书,且经医院伦理委员会批准。

1.2 方法

两组患者术前进行常规检查,并通过鼻窥镜检查鼻息肉大小、位置、形态等,明确是否存在变异,术前常规应用抗生素。

1.2.1 对照组 给予传统鼻息肉摘除术治疗,切除中鼻甲后部、蝶筛前壁,而后将前组筛窦、后组筛窦、额窦口开放,切除上颌窦后,如患者存在鼻中隔偏曲,同时进行矫正治疗,患者术后应用生理盐水冲洗鼻腔,应用凡士林纱布填塞止血,术后常规应用抗生素、肾上腺皮质激素 2 d 预防感染,清理鼻道分泌物。

1.2.2 观察组 行鼻窦内窥镜治疗,术前予以全麻处理,采用 Messerklinger 术式在内镜下对钩突以及筛泡进行切除,同时采

用 Hummer 术式将息肉予以切除。综合患者具体情况选择开放全筛或前筛,并扩大额窦或上颌窦,部分患者予以鼻中隔矫正或部分鼻甲切除处理。术后应用生理盐水冲洗鼻腔,应用凡士林纱布填塞止血,术后常规应用抗生素、肾上腺皮质激素 2d 预防感染,清理鼻道分泌物。

1.3 观察指标

分别比较两组临床疗效以及治疗前、治疗后 3 个月症状评分、嗅觉功能以及鼻腔通气情况。其中疗效判定标准主要是根据 1997 年中华医学会耳鼻喉科分会制定的鼻窦炎合并鼻息肉诊断治疗标准^[5]:显效:治疗后患者临床症状消失,术后复查鼻窦口开放良好,息肉消失,鼻腔内黏膜上皮化,无脓性分泌物;有效:治疗后患者临床症状有所改善,术后鼻窦内黏膜部分水肿、肥厚或形成肉芽组织,有少量脓性分泌物;无效:治疗后临床症状无改善,甚至加重,术后鼻窦腔粘连,窦口闭锁。总有效率=(显效+有效)例数/总病例数*100%。症状评分则分为鼻塞、脓涕、嗅觉障碍、疼痛四个项目,每项分值 0~3 分,总分 0~12 分,得分越高表示患者症状越严重^[6]。鼻气道总阻力采用美国 Master PF210 前鼻压测压器进行测定。嗅觉功能则根据美国康涅狄格化学感觉临床研究中心所制定的嗅觉功能测试法标准进行判定^[7]:0~1.0 分为正常;1.1~2.5 分为轻度损伤;2.6~4.0 分为中度损伤;4.1~5.4 分为重度损伤;>5.5 分为完全丧失。

1.4 统计学方法

所有数据均采用 SPSS21.0 统计软件进行分析。其中以 χ^2 检验计数资料,以率(%)表示。以 t 检验计量资料,以均数 $\pm$ 标准差($\bar{x} \pm s$)表示。 $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 两组临床疗效对比

观察组治疗总有效率为 95.00%(38/40),高于的对照组的 77.50%(31/40),差异具有统计学意义($P < 0.05$)。见下表 1。

表 1 两组临床疗效对比[n(%)]

Table 1 Comparison of clinical efficacy between the two groups [n(%)]

Groups	n	Excellence	Effective	Invalid	Total effective rate
Observation group	40	20(50.00)	18(45.00)	2(5.00)	38(95.00)
Control group	40	16(40.00)	15(37.50)	9(22.50)	31(77.50)
χ^2	-				5.165
P	-				0.023

2.2 治疗前、治疗后 3 个月两组症状评分对比

治疗前两组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分比较无统计学差异($P > 0.05$),治疗后 3 个月两组患者鼻塞、脓

涕、嗅觉障碍、疼痛及总症状评分均低于治疗前,且观察组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分低于对照组 ($P < 0.05$)。见下表 2。

表 2 治疗前、治疗 3 个月两组症状评分对比(分, $\bar{x} \pm s$)

Table 2 Comparison of symptom scores before treatment and 3 months after treatment between the two groups (scores, $\bar{x} \pm s$)

Groups	Time	Nasal congestion	Pus	Olfactory disorder	Pain	Total scores
Observation group	Before treatment	2.6 ± 0.5	2.4 ± 0.3	2.2 ± 0.4	2.6 ± 0.4	9.8 ± 2.4
	3 months after treatment	$1.0 \pm 0.3^{**}$	$0.9 \pm 0.2^{**}$	$0.9 \pm 0.3^{**}$	$1.0 \pm 0.2^{**}$	$3.8 \pm 1.1^{**}$
Control group	Before treatment	2.6 ± 0.4	2.3 ± 0.4	2.3 ± 0.5	2.6 ± 0.4	9.7 ± 2.5
	3 months after treatment	$1.3 \pm 0.2^{\#}$	$1.2 \pm 0.3^{\#}$	$1.3 \pm 0.3^{\#}$	$1.3 \pm 0.2^{\#}$	$5.1 \pm 1.7^{\#}$

Note: Compared with the control group, $^{*}P < 0.05$; Compared with before treatment, $^{\#}P < 0.05$.

2.3 治疗前、治疗后 3 个月两组气道总阻力及嗅觉功能评分对比

治疗前两组患者鼻气道总阻力、嗅觉功能评分比较无统计

学差异($P>0.05$), 治疗后 3 个月两组患者鼻气道总阻力、嗅觉功能评分均低于治疗前, 且观察组低于对照组(均 $P<0.05$)。见下表 3。

表 3 治疗前、治疗后 3 个月两组鼻气道总阻力及嗅觉功能评分对比($\bar{x} \pm s$)

Table 3 Comparison of total airway resistance and olfactory function scores between the two groups before and after treatment($\bar{x} \pm s$)

Groups	n	Nasal airway resistance		t	P	Olfactory function score		t	P
		(kPa/s·L)				(scores)			
		Before	3 months after			Before	3 months after		
		treatment	treatment			treatment	treatment		
Observation group	40	3.1± 0.3	0.5± 0.1	3.012	0.000	4.8± 1.3	1.3± 0.2	3.130	0.000
Control group	40	3.0± 0.4	1.2± 0.2	2.956	0.000	4.8± 1.4	2.2± 0.4	2.994	0.000
t	-	1.265	2.859	-	-	0.003	2.728	-	-
P	-	0.210	0.000	-	-	0.974	0.008	-	-

3 讨论

鼻窦炎合并鼻息肉是一种以鼻粘膜异常增生为特征的慢性炎症, 由于患者鼻粘膜肿胀、炎性渗出, 导致鼻腔缩窄, 鼻窦形成缺氧环境, 进而发生细菌感染等, 不但会对患者的生活质量造成严重影响, 而且还会加重患者自身的哮喘以及慢性支气管炎等疾病, 如不给予及时有效的治疗, 甚至会导致鼻窦骨质增生、鼻腔通气功能障碍以及鼻腔黏膜萎缩等^[8-10]。传统的鼻息肉摘除手术由于手术视野较差, 手术过程中患者出血量较大, 很难达到理想的治疗效果, 加之止血效果不理想, 导致手术视野较模糊, 进一步增加了手术的难度和风险, 不利于患者预后^[11-13]。近年来, 随着医疗器械的发展, 鼻窦内镜下手术治疗成为了鼻窦炎合并鼻息肉新的选择^[14]。这种手术方法通过鼻内镜扩大手术视野, 可以清晰的显示鼻窦内的精细结构, 从而可以直观的观察鼻腔和鼻窦病变组织, 相比传统术式而言其具有手术器械先进、手术理念提升以及手术方式提高等优势^[15]。

本研究通过对鼻窦内镜手术治疗和传统手术治疗比较来看, 观察组治疗总有效率为 95.00%(38/40), 显著高于对照组的 77.50%(31/40)。这与 Philpott C 等人的研究报道相似^[16,17], 说明了鼻窦内镜手术治疗鼻窦炎合并鼻息肉具有显著的临床疗效。其中主要原因在于: 鼻窦内镜术主要是根据鼻内镜检查与鼻窦 CT 结合进行的手术治疗, 可帮助术者明确窦口鼻道复合体解剖结构, 从而有利于手术的顺利完成, 并有效缓解鼻腔黏膜的局部充血以及水肿, 避免了对患者鼻窦鼻腔造成不必要的损伤, 为患者早日康复创造了有利条件^[18,19]。与此同时, 治疗后 3 个月两组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分均低于治疗前, 且观察组患者鼻塞、脓涕、嗅觉障碍、疼痛及总症状评分均显著低于治疗前, 而观察组又显著低于对照组。这符合 Koskinen A 等人的研究报道^[20], 提示了鼻窦内镜手术治疗鼻窦炎合并鼻息肉可显著改善患者嗅觉功能。究其原因, 笔者认为鼻窦内镜术可有效接触鼻腔梗阻, 从而刺激了鼻腔内残留的嗅感觉神经纤维发挥作用^[21-23]; 同时, 术后恢复并保证窦口鼻道复合体以及筛放的通气与引流通畅, 进一步有利于鼻腔鼻窦黏膜纤毛功能的恢复^[24-26]。另外, 治疗后两组气道总阻力显著低于治

疗前, 而观察组又显著低于对照组。这和 Kim do H 等人的研究报道相一致^[27], 说明了鼻窦内镜手术治疗鼻窦炎合并鼻息肉可有效改善患者鼻腔通气情况。其中主要原因可能是鼻窦内镜术具有视野清晰、暴露完整以及处理鼻腔复合病变作用较强等优点, 从而显著改善了鼻腔鼻窦引流功能障碍情况, 且在手术过程中充分开放鼻窦, 有利于鼻腔通气的恢复, 并有效防止术后复发的风险^[28-30]。

综上所述, 鼻窦内镜手术治疗鼻窦炎合并鼻息肉的疗效显著, 可有效缓解患者临床症状, 并显著改善鼻腔通气以及嗅觉功能。安全性较好, 值得临床推广应用。

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