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## 鼻中隔成形术中鼻腔填塞法及鼻中隔“8”字缝合法的疗效比较研究\*

李 岗 姚 昆<sup>△</sup> 朱玄生 曹 玮 尹志利

(安徽医科大学附属阜阳医院耳鼻咽喉头颈外科 安徽 阜阳 236000)

**摘要 目的:**探讨鼻中隔成形术中鼻腔填塞法及鼻中隔“8”字缝合法的疗效。**方法:**选取 2017 年 7 月~2018 年 7 月期间我院收治的拟行鼻中隔成形术的鼻中隔偏曲患者 60 例。采用乱数表法将患者分为对照组、实验组两组,各 30 例患者,两组患者均行鼻内镜下鼻中隔成形术,术后对照组给予鼻腔填塞法处理,实验组给予鼻中隔“8”字缝合法处理。比较两组术后临床疗效、鼻粘膜水肿情况,观察两组不同时间点视觉疼痛模拟评分(VAS)情况,记录两组患者术后鼻中隔并发症发生情况。**结果:**实验组术后 7d 临床总有效率为 96.67%(29/30),显著高于对照组患者的 80.00%(24/30),差异有统计学意义 ( $P<0.05$ )。与术前相比,两组患者术后 12hVAS 评分升高,术后 24h、术后 48hVAS 评分下降( $P<0.05$ );与术后 12h 相比,两组患者术后 24h、术后 48hVAS 评分均下降,且术后 48hVAS 评分低于术后 24h( $P<0.05$ );实验组术后 12h、术后 24h、术后 48hVAS 评分均低于对照组( $P<0.05$ )。实验组鼻粘膜水肿 0 级患者数量显著高于对照组,鼻粘膜水肿 1 级患者数量显著低于对照组( $P<0.05$ );两组鼻粘膜水肿 2 级患者数量比较差异无统计学意义( $P>0.05$ );两组患者鼻中隔并发症总发生率比较差异无统计学意义( $P>0.05$ )。**结论:**相较于鼻腔填塞法,鼻中隔成形术中采用鼻中隔“8”字缝合法疗效显著,可减轻患者疼痛,改善患者鼻粘膜水肿情况,且不会增加并发症发生率,具有一定的临床应用价值。

**关键词:**鼻中隔成形术;鼻腔填塞法;鼻中隔“8”字缝合法;疗效;比较

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## Comparative Study of Nasal Packing and Septum "8" Suture in Nasal Septum Plasty\*

LI Gang, YAO Kun<sup>△</sup>, ZHU Xuan-sheng, CAO Wei, YIN Zhi-li

(Department of Otolaryngology Head and Neck Surgery, Affiliated Fuyang Hospital of Anhui Medical University,

Fuyang, Anhui, 236000, China)

**ABSTRACT Objective:** To investigate the effect of nasal packing and septum "8" suture in nasal septum plasty. **Methods:** 60 patients with deviation of nasal septum who were scheduled to undergo septoplasty in our hospital from July 2017 to July 2018 were selected. The patients were divided into control group and experimental group by random number table, each 30. Two groups of patients underwent endoscopic septum plasty under nasal endoscope. The control group was treated with nasal packing, and the experimental group was treated with septum "8" suture. The clinical efficacy and nasal mucosal edema were compared between the two groups. Visual analogue pain score (VAS) was observed at different time points in the two groups, and postoperative complications of nasal septum were recorded in two groups of patients. **Results:** The total effective rate at 7d after operation in the experimental group was 96.67%(29/30), which was significantly higher than 80.00%(24/30) in the control group, the difference was statistically significant ( $P<0.05$ ). Compared with preoperative, the VAS scores of the two groups increased at 12h after operation, the VAS scores decreased at 24h after operation and 48h after operation ( $P<0.05$ ). Compared with 12h after operation, the VAS scores of the two groups decreased at 24h after operation and 48h after operation, and the VAS scores of 48h after operation were lower than that of 24h after operation ( $P<0.05$ ). The VAS scores of 12h after operation, 24h after operation and 48h after operation in the experimental group were lower than those of the control group ( $P<0.05$ ). The number of patients with grade 0 nasal mucosal edema in the experimental group were significantly higher than those in the control group, and the number of patients with grade 1 nasal mucosal edema were significantly lower than those in the control group ( $P<0.05$ ). There were no significant differences in the number of patients with grade 2 nasal mucosal edema between the two groups ( $P>0.05$ ). There was no significant difference in the incidence of nasal septal complications between the two groups ( $P>0.05$ ). **Conclusion:** Compared with the nasal packing method, the "8" suture of nasal septum in nasal septum plasty is more effective, which can relieve the pain, improve the nasal mucosal edema, and do not increase the incidence of complications. It has certain clinical application value.

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作者简介:李岗(1980-),男,本科,主治医师,从事耳鼻咽喉科学、慢性鼻窦炎、鼻中隔偏曲、鼻腔鼻窦恶性肿瘤方面的研究,

E-mail: ljuaih@163.com

△ 通讯作者:姚昆(1970-),男,硕士,主任医师,从事耳鼻咽喉头颈科学、中耳胆脂瘤、慢性鼻窦炎、鼻中隔偏曲、喉癌方面的研究,

E-mail: uwxnkb@163.com

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## 前言

鼻中隔偏曲是指鼻中隔向一侧或两侧弯曲, 引发局部突起, 造成鼻窦、鼻腔功能障碍, 是临床耳鼻咽喉科的多发病之一<sup>[1-3]</sup>。临床主要表现为鼻塞、鼻出血、头痛等症状, 该病好发于有鼻外伤史的患者, 且与患者年龄及性别存在一定的联系<sup>[4,5]</sup>。目前, 临床针对该病的治疗仍以手术矫正为主, 随着鼻内镜手术的广泛开展, 鼻中隔成形术已成为当前国内外较为常见且成熟的手术, 然而传统手术后所用的凡士林纱条或膨胀海绵填塞类鼻腔填塞法常给患者带来闷胀不适感, 严重者可诱发鼻心反射, 且取出填塞物时患者易再次产生痛感或出血现象, 远远超过手术本身创伤带来的疼痛, 给患者饮食、睡眠以及情绪都带来严重影响<sup>[6-8]</sup>。而鼻中隔行“8”字缝合则可以免填塞, 同时其可修复撕裂的粘膜和有效固定鼻中隔软骨。为了进一步验证鼻腔填塞法及鼻中隔“8”字缝合的疗效区别, 本研究设置对照试验, 现整理报道如下。

## 1 资料与方法

### 1.1 临床资料

选取我院于 2017 年 7 月~2018 年 7 月期间收治的 60 例拟行鼻中隔成形术的鼻中隔偏曲患者。纳入标准: (1) 所有患者均具有鼻中隔偏曲相关临床症状, 如有明显鼻中隔偏曲, 抵触周围组织, 鼻塞、头痛、鼻出血及鼻中隔偏曲所致的中鼻甲外移、中鼻道引流狭窄等。(2) 均经 CT 等临床影像学证实; (3) 均符合手术指征; (4) 术前未应用凝血酶及鼻喷激素等药物者; (5) 患者及其家属知情本次研究并已签署同意书。排除标准: (1) 手术治疗前 1 个月内存在感染史者; (2) 合并有免疫功能异常者; (3) 既往有鼻部手术史者; (4) 合并有鼻部其他严重性疾病者。采用随机数字表法将患者分为对照组( $n=30$ )和实验组( $n=30$ ), 其中对照组男 18 例, 女 12 例, 年龄 18~60 岁, 平均( $31.09 \pm 4.72$ ) 岁; 体质指数 20.8~25.6  $\text{kg/m}^2$ , 平均( $22.51 \pm 1.08$ )  $\text{kg/m}^2$ 。实验组男 16 例, 女 14 例, 年龄 17~59 岁, 平均( $30.74 \pm 5.37$ ) 岁; 体质指数 21.3~25.4  $\text{kg/m}^2$ , 平均( $22.48 \pm 0.73$ )  $\text{kg/m}^2$ 。纳入患者一般资料比较无差异( $P>0.05$ ), 本次研究获得医院伦理学委员会批准。

### 1.2 治疗方法

所有患者均由同一名主刀医师及同一组手术团队完成手术, 均行鼻内镜下鼻中隔成形术, 术中仔细电凝止血, 确认创面是否有活动性出血, 两组术后均采用含有肾上腺素的生理盐水对手术腔进行冲洗, 对照组术后止血采用鼻腔填塞法, 将两块高分子止血海绵填塞于每侧鼻腔, 并于术后 2d 取出鼻腔填塞物。而实验组则使用鼻中隔“8”字缝合法, 患者鼻中隔选用 4-0 无损线缝合, 采用自后向前的方式, 具体如下: 第 1 针于切口同侧中鼻甲前上方进入, 穿透鼻中隔到达对侧, 于穿出位置垂直向下约 1 cm 穿透至对侧, 于穿出位置向前向上直线距离约 2 cm 处穿透至对侧, 方式如前述, 连续行此类“Z”型缝合 6 针, 于切

口一侧鼻前庭处前端缝线打结, 如图 1 所示。术后 4d 给予拆线处理, 所有患者术后均给予布地奈德鼻喷剂治疗。

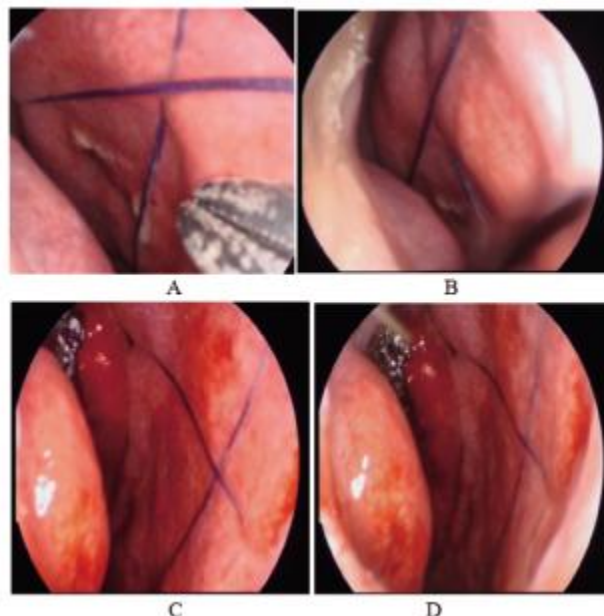


图 1 鼻中隔“8”字缝合法术后第 2d-5d 患者恢复情况

Fig. 1 Recovery of patients with nasal septum "8" suture 2d-5d after operation

注: A: 鼻中隔“8”字缝合法术后第 2d, 鼻内窥镜下见鼻中隔缝线在位, 鼻腔粘膜无明显水肿, 鼻中隔无血肿及穿孔; B: 鼻中隔“8”字缝合法术后第 3d, 鼻内窥镜下见鼻中隔缝线在位, 鼻腔内少许血迹, 粘膜无水肿, 鼻中隔无血肿; C: 鼻中隔“8”字缝合法术后第 4d, 鼻内窥镜下见鼻中隔缝线在位, 鼻腔内情况良好; D: 鼻中隔“8”字缝合法术后第 5d, 鼻内窥镜下见鼻中隔缝线在位, 未见鼻中隔血肿及穿孔。

Note: A: On the 2nd day after the "8" suture of nasal septum, nasal septum suture was in place under nasal endoscope, nasal mucosa was not evident edema, nasal septum was not hematoma and perforation; B: On the 3rd day after the "8" suture of the nasal septum, nasal septum suture was in place under nasal endoscope, there was little blood stain in the nasal cavity, no edema in the mucosa and no hematoma in the nasal septum; C: On the 4th day after the "8" suture of nasal septum, nasal septum suture was in place under nasal endoscope and the nasal cavity was in good condition; D: On the 5th day after the "8" suture of nasal septum, nasal septum suture was in place under nasal endoscope, and there was no hematoma or perforation of nasal septum.

### 1.3 观察指标

(1) 疗效<sup>[9]</sup> 评价两组患者术后 7d 临床疗效, 具体判定标准如下: 显效: 鼻中隔偏曲得到矫正, 临床症状消失, 切口愈合情况佳; 有效: 鼻中隔偏曲得到矫正, 偶有鼻塞、头痛等临床症状出现, 切口愈合情况较好; 无效: 术后鼻中隔偏曲矫正情况不理想, 鼻腔通气改善程度一般, 仍存在相关临床症状。总有效率 = 显效率 + 有效率。(2) 疼痛情况 于术前、术后 12h、术后 24h、术后 48h 采用视觉疼痛模拟评分法 (Visual analogue scale, VAS)

<sup>[10]</sup>评价患者疼痛情况, VAS 总分 1~10 分, 其中 1 分表示无痛, 10 分表示难以忍受的疼痛, 分数越高, 疼痛情况越严重。(3)鼻粘膜水肿情况 于术后 3d 观察两组患者鼻粘膜水肿发生情况, 视严重程度分为以下三级<sup>[11]</sup>: 下鼻甲无水肿或轻度水肿(0 级)、下鼻甲中度水肿(1 级)、下鼻甲重度水肿(2 级)。(4)观察两组术后 7d 内鼻中隔并发症发生情况。

#### 1.4 统计学方法

采用 SPSS20.0 处理数据, 计量资料用均数± 标准差( $\bar{x} \pm s$ )

表示, 采用 t 检验, 计数资料以率(%)表示, 采用  $\chi^2$  检验, 检验标准设置为  $\alpha=0.05$ 。

## 2 结果

### 2.1 两组患者临床疗效比较

实验组术后 7d 临床总有效率为 96.67%(29/30), 高于对照组患者的 80.00%(24/30), 差异有统计学意义( $P<0.05$ ), 详见表 1。

表 1 两组患者临床疗效比较例(%)

Table 1 Comparison of clinical efficacy of two groups of patients n(%)

Groups	Effect	Good	Invalid	Total effective rate
Control group(n=30)	16(53.33)	8(26.67)	7(23.33)	24(80.00)
Experimental group(n=30)	27(90.00)	2(6.67)	1(3.33)	29(96.67)
$\chi^2$				4.043
$P$				0.017

### 2.2 两组患者术后不同时间点 VAS 评分比较

两组患者术前 VAS 评分比较差异无统计学意义( $P>0.05$ ); 与术前相比, 两组患者术后 12hVAS 评分升高, 术后 24h、术后 48hVAS 评分下降( $P<0.05$ ); 与术后 12h 相比, 两组

患者术后 24h、术后 48hVAS 评分下降, 且术后 48hVAS 评分低于术后 24h ( $P<0.05$ ); 实验组术后 12h、术后 24h、术后 48hVAS 评分均低于对照组( $P<0.05$ ); 详见表 2。

表 2 两组患者术后不同时间点 VAS 评分比较( $\bar{x} \pm s$ , 分)

Table 2 Comparison of VAS scores between two groups at different time points after operation( $\bar{x} \pm s$ , scores)

Groups	n	Preoperative	12h after operation	24h after operation	48h after operation
Control group	30	4.38± 0.82	6.43± 1.22*	3.39± 1.15* <sup>#</sup>	2.24± 1.15* <sup>#&amp;</sup>
Experimental group	30	4.41± 0.78	5.41± 1.38*	2.53± 1.21* <sup>#</sup>	1.03± 0.54* <sup>#&amp;</sup>
t	-	0.145	0.033	2.822	5.217
$P$	-	0.885	0.004	0.007	0.000

Note: compared with preoperative, \* $P<0.05$ ; compared with 12h after operation, <sup>#</sup> $P<0.05$ ; compared with 24h after operation, <sup>&</sup> $P<0.05$ .

### 2.3 两组患者术后鼻粘膜水肿、鼻中隔并发症情况比较

实验组鼻粘膜水肿 0 级患者数量显著高于对照组, 鼻粘膜水肿 1 级患者数量显著低于对照组( $P<0.05$ ); 两组鼻粘膜水肿

2 级患者数量比较差异无统计学意义( $P>0.05$ ); 两组患者鼻中隔并发症总发生率比较差异无统计学意义( $P>0.05$ ); 详见表 3。

表 3 两组患者术后鼻粘膜水肿、鼻中隔并发症情况比较例(%)

Table 3 Comparison of nasal mucosa edema and nasal septal complications after operation between the two groups n(%)

Groups	Nasal mucosa edema			Nasal septal complications				Complication rate
	Grade 0	Grade 1	Grade 2	Hematoma	Abscess	Perforation	Nasal cavities	
Control group	2(6.67)	22(73.33)	6(20.00)	2(6.67)	0(0.00)	0(0.00)	0(0.00)	2(6.67)
Experimental group	21(70.00)	7(23.33)	2(6.67)	0(0.00)	0(0.00)	0(0.00)	0(0.00)	0(0.00)
$\chi^2$	25.452	15.017	2.308					2.069
$P$	0.000	0.000	0.359					0.367

## 3 讨论

鼻中隔偏曲主要病因为鼻中隔的组成骨发育不均衡, 从而产生不同的张力曲线, 致使诸骨压迫了中隔粘骨膜内的三叉神经末梢及伴随的植物神经, 导致患者出现神经紊乱, 引发鼻腔

功能障碍, 给患者生活质量带来严重影响<sup>[12-14]</sup>。目前手术矫正为治疗鼻中隔偏曲的唯一方式, 当前鼻中隔成形术发展已较为成熟, 但关于其术后治疗尚存在一定争议<sup>[15, 16]</sup>。鼻中隔成形术后常规行鼻腔填塞, 其主要是减少血肿形成, 促使双侧粘骨膜快速恢复, 但越来越多的研究表明<sup>[17-19]</sup>, 患者经鼻腔填塞后经常出现



头痛、鼻面部胀痛难忍等症状,严重影响患者饮食、休息,而且术后即使可将鼻腔填塞物抽取出,仍难以避免水肿的形成;同时鼻腔填塞压迫将促使鼻腔压力升高,不仅会引发患者头痛、鼻部痛等症状,还可增加穿孔的发生几率,预后一般。路承等人研究表明<sup>[20]</sup>,采用膨胀海绵和吸纳棉进行鼻腔填塞可有效止血,但纳吸棉更有利于减轻患者痛苦及改善症状程度。然而采用不同材料进行鼻腔填塞的方式也仍有一定的疗效提升空间。近些年来有学者认为<sup>[21,22]</sup>,鼻中隔偏曲成形术中行鼻中隔缝合合法可以减轻患者的术后痛苦,临床应用价值较高。故本研究就此展开探讨。

本研究结果显示,实验组术后临床总有效率显著高于对照组。提示鼻中隔“8”字缝合合法可进一步提高鼻中隔成形术后临床治疗效果。分析其原因,鼻中隔“8”字缝合合法可有效稳定鼻中隔软骨,修复撕裂黏膜效果更佳,同时可避免填塞物对鼻腔血管的神经压迫,减轻对鼻腔黏膜纤毛功能的影响,无须每日处理鼻腔内痂皮、分泌物,有利于患者术后迅速恢复,进一步提高治疗效果<sup>[23-25]</sup>。本研究还显示,两组患者VAS评分于术后12h呈升高状态,随即于术后24h、术后48h呈下降状态,实验组术后12h、术后24h、术后48hVAS评分均低于对照组。表明鼻中隔“8”字缝合合法减轻患者术后疼痛效果更佳,且随时间推移,痛苦减轻更明显。VAS是国内外常用于评价患者主观疼痛度的常用量表,本次研究中使用鼻中隔“8”字缝合合法的患者疼痛感明显减轻,这与田卫卿等人研究结果一致<sup>[26]</sup>。这主要是由于进行鼻腔填塞时,患者有强烈不适,尤其当抽出填塞物时,其疼痛感更为明显。而鼻中隔“8”字缝合合法缝合后不会对患者鼻腔造成压迫,且缝合中隔黏膜时可封闭整个中隔死腔,受力均匀,减少出血,从而可以减轻刺激性损伤,进而降低患者疼痛感<sup>[27-29]</sup>。另实验组黏膜水肿情况与对照组比较有显著差异性,提示相较于鼻腔填塞法,鼻中隔“8”字缝合合法对患者黏膜损伤较轻,其可有效缩短术后黏膜恢复时间。而两组并发症发生率比较无差异,表明鼻中隔“8”字缝合合法安全性较好,不会增加不良反应发生率。值得注意的是,鼻中隔“8”字缝合合法对施术者要求较高,施术者需具有一定的鼻腔内操作技巧<sup>[30]</sup>。

综上所述,鼻中隔成形术中采用鼻中隔“8”字缝合合法疗效确切,患者主观疼痛度明显减轻,鼻粘膜水肿情况得到明显改善,安全性较好,相比于传统鼻中隔术后鼻腔填塞,该方法值得推广应用。

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