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手术治疗儿童阻塞性睡眠呼吸暂停低通气综合征临床疗效观察

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摘要 目的:观察手术治疗儿童阻塞性睡眠呼吸暂停低通气综合征(OSAHS)的手术治疗方法及临床效果,为临床治疗提供依据。**方法:**选取我院2010年2月~2013年1月期间收治的儿童阻塞性睡眠呼吸暂停低通气综合征患者56例做研究对象,对患儿的手术治疗方法及手术前后呼吸暂停指数、最低血氧饱和度及呼吸暂停低通气指数平均值进行记录和分析,比较其临床疗效情况。**结果:**三组患儿术后呼吸暂停指数、伴最低血氧饱和度、呼吸暂停低通气指数与术前比较,差异明显具有统计学意义,术后优于术前。中、重度鼻咽气道狭窄程度比较,术后较术前疗效显著,差异明显具有统计学意义($P<0.05$)。**结论:**儿童阻塞性睡眠呼吸暂停低通气综合征手术后呼吸暂停指数、伴最低血氧饱和度、呼吸暂停低通气指数得到显著改善,是治疗最佳方案,建议推广应用。

关键词:手术;儿童;阻塞性睡眠呼吸暂停低通气综合征;临床疗效

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Operation Treatment of Pediatric Obstructive Sleep Apnea Hypopnea Syndrome Clinical Observation

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ABSTRACT Objective: To observe the effect of operation treatment of pediatric obstructive sleep apnea hypopnea syndrome (OSAHS) and the clinical effect of the operation method of treatment, and provide the basis for clinical therapy. **Methods:** Selected in our hospital from 2010 February~2013 year in January during the period of children with obstructive sleep apnea hypopnea syndrome in 56 patients before and after operation as the research object, methods of treatment and operation on children with apnea index, the lowest oxygen saturation and apnea-hypopnea index average values were recorded and analyzed, compared the efficacy of the situation. **Results:** The apnea index, with the lowest oxygen saturation, apnea hypopnea index before and after treatment were compared between the three groups after operation, difference has statistical significance, after operation than before operation. In comparison, severe nasopharyngeal airway stenosis after operation than before operation, obvious curative effect, obvious difference was statistically significant ($P<0.05$). **Conclusion:** Children with obstructive sleep apnea hypopnea syndrome after operation apnea index, with the lowest oxygen saturation, apnea hypopnea index has been significantly improved, is the treatment of the best solution, application.

Key words: Operation; Children; Obstructive sleep apnea hypopnea syndrome; Clinical effect

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前言

阻塞性睡眠呼吸暂停低通气综合征(Obstructive sleep apnea-hypopnea syndrome, OSAHS)是指由于睡眠时上呼吸道梗阻导致的反复呼吸暂停及因此带来的低氧血症、高碳酸血症等一系列并发症。严重影响人们的日常生活及工作,成为危害人类健康的重要疾病。常见于老年人,但近年来相关资料^[1]报道在儿童的发病率逐渐升高,患病率约为1%~3%,上呼吸道感染时鼾声较重。Ali等对782例4~5岁幼儿进行问卷调查发现,其中12.1%睡眠中大多出现打鼾,习惯性打鼾与白天嗜睡、睡眠不宁、多动相关。近期采用问卷调查和选择性多导睡眠仪对6个月至6岁的患儿进行研究,打鼾的报道为3.2%,偶为16.7%。发病年龄2~5岁,常见年龄3~5岁。男女比例4.5:1。发病率Rosen

认为大约是1%~3%。儿童OSAHS在流行病学、病因学、生理病理及临床诊治方面与成人有较大差异,是一个独立的临床综合征^[2]。临床治疗主要以手术治疗为主,笔者在临床过程中对近年来收治的儿童OSAHS患者手术治疗情况进行分析,旨在了解临床疗效,结果报道如下。

1 资料与方法

1.1 临床资料

本组共72例,均为我院2010年2月~2013年2月期间收治入院的儿童OSAHS患者。其中男44例,女28例。年龄3~15岁,平均年龄8.7岁。所有患儿均按照2002年全国睡眠呼吸暂停低通气综合征专题研讨会(杭州会议)制定的诊断标准^[3]确诊,所有患儿均有睡眠时打鼾、呼吸暂停、张口呼吸、烦躁不安及注意力下降等症状,伴夜间遗尿18例、伴慢性鼻窦炎16例、伴分泌性中耳炎14例。检查见腭扁桃体I度17例,II度36例,III度19例。

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1.2 手术方法

所有患儿均采用手术治疗,采用全麻方法麻醉,采用 Davis 开口器将患者口咽腔暴露,并采用常规单、双侧扁桃体剥离,随后在内镜引导下对患者腺样体进行刮除。腺样体切除采用 0 度鼻内镜经患者鼻腔,在充分暴露患者的鼻咽部后用电动切削器对患者腺样体进行切除^[4],术中尽量避免损伤咽鼓管及咽口,同时注意不要切除太过深入,以防出血。在仔细观察咽后壁有无出血并及时止血。术后观察 5 d,观察患者呼吸机出血情况,同时注意进行消炎防治感染。

1.3 疗效评定

根据患者的扁桃体和鼻咽气道狭窄程度进行分组数据分析,对患儿术前、术后呼吸暂停指数、呼吸暂停低通气指数、最低血氧饱和度情况进行对比分析。有效:呼吸暂停指数、呼吸暂

停低通气指数,扁桃体及肥大程度降低,伴最低血氧饱和度升高。

1.4 统计学方法

采用 spass13.0 对数据进行统计学处理,计量资料以均数 $\pm$ 标准差($\bar{x} \pm s$)表示,均数采用 t 检验,组间分析选用方差分析检验, $P < 0.05$ 具有显著性意义。

2 结果

2.1 所有患儿术前、后各参数情况分析比较

所有患儿术前、后呼吸暂停指数、伴最低血氧饱和度、呼吸暂停低通气指数比较,术后各参数显著优于术前,差异显著有统计学意义($P < 0.05$)。见表 1。

表 1 所有患儿术前、后各参数比较

Table 1 Comparison of the parameters in of all patients before and after operation

The project / content /	apnea index (/h)	with the lowest oxygen saturation	Apnea hypopnea index (/h)
Before operation	1.8 $\pm$ 0.4	0.72 $\pm$ 0.12	8.2 $\pm$ 2.7
After operation	0.6 $\pm$ 0.3	0.87 $\pm$ 0.17	1.2 $\pm$ 1.2
P	<0.05	<0.05	<0.05

注:与术前比较计算 P 值。

Note: compared with the preoperative P calculation.

2.2 所有患儿术前、后呼吸暂停指数情况分析

所有患儿均根据扁桃体程度分为 I、II、III 度,术前对各组进行两两分析,呼吸暂停指数差异无显著,无统计学意义($P > 0.05$),术后对三组患者进行两两分析,呼吸暂停指数无显著差

异,无统计学意义($P > 0.05$)。三组患儿术后呼吸暂停指数与术前比较,差异明显具有统计学意义,术后优于术前。中、重度鼻咽气道狭窄程度比较,术后较术前疗效显著,差异明显具有统计学意义($P < 0.05$)。见表 2。

表 2 所有患儿术前、后呼吸暂停指数分析 [次/h]

Table 2 Andysis of apnea index before and after the operation

The project / content	Tonsil I degree	Tonsil II	III degree	Moderate hypertrophy of tonsil	Severe hypertrophy
n	17	36	19	31	41
Before operation	1.9 $\pm$ 0.1	1.8 $\pm$ 0.4	1.8 $\pm$ 0.2	1.2 $\pm$ 0.3	2.3 $\pm$ 0.2
After operation	0.6 $\pm$ 0.3	0.8 $\pm$ 0.1	0.6 $\pm$ 0.1	0.4 $\pm$ 0.1	1.0 $\pm$ 0.1
P	<0.05	<0.05	<0.05	<0.05	<0.05

注:与术前比较计算 P 值。

Note: compared with the preoperative P calculation.

2.3 所有患儿术前、后伴最低血氧饱和度分

扁桃体 I、II、III 度患儿术后伴最低血氧饱和度情况显著改善,较术前差异显著具有统计学意义($P < 0.05$)。鼻咽气道狭

窄程度中、重度肥大患儿术后伴最低血氧饱和度得到显著改善,较术前差异明显具有统计学意义($P < 0.05$)。见表 3。

表 3 所有患儿术前、后伴最低血氧饱和度分析情况 [次/h]

Table 3 Analysis of the lowest oxugen before and after the operation

The project / content	Tonsil I degree	Tonsil II	III degree	Moderate hypertrophy of tonsil	Severe hypertrophy
n	17	36	19	31	41
Before operation	0.79 $\pm$ 0.13	0.68 $\pm$ 0.15	0.55 $\pm$ 0.12	0.78 $\pm$ 0.11	0.63 $\pm$ 0.12
After operation	0.91 $\pm$ 0.13	0.86 $\pm$ 0.12	0.82 $\pm$ 0.13	0.89 $\pm$ 0.12	0.83 $\pm$ 0.13
P	<0.05	<0.05	<0.05	<0.05	<0.05

注:与术前比较计算 P 值。

Note: compared with the preoperative P calculation.

2.4 患儿术前、后呼吸暂停低通气指数分析

扁桃体 I、II、III 度患儿术后呼吸暂停低通气指数情况得到显著改善,较术前差异明显具有统计学意义($P<0.05$)。鼻咽

气道狭窄程度分析,中、重度肥大患儿术后呼吸暂停低通气指数得到显著改善,较术前比较差异明显具有统计学意义($P<0.05$)。见表 4。

表 4 所有患儿术前、后呼吸暂停低通气指数分析 [次/h]

Table 4 Analysis of breath apnea-hypopnea index before and after the operation

The project / content	Tonsil I degree	Tonsil II	III degree	Moderate hypertrophy of tonsil	Severe hypertrophy
n	17	36	19	31	41
Before operation	6.7± 1.3	8.1± 1.7	8.6± 1.4	7.1± 1.9	9.5± 2.2
After operation	1.3± 1.0	1.2± 1.0	1.2± 1.1	0.6± 1.2	1.8± 1.2
P	<0.05	<0.05	<0.05	<0.05	<0.05

注:与术前比较计算 P 值。

Note: compared with the preoperative P calculation.

3 讨论

阻塞性睡眠呼吸暂停低通气综合征 (Obstructive sleep apnea-hypopnea syndrome, OSAHS) 是常见于老年患者,但近年来儿童发病率逐年增高。相关文献^[5-8]报道,腺样体肥大是儿童 OSAHS 最常见的病因。其次原因为扁桃体肥大,相关文献^[9-12]报道扁桃体肥大患儿 OSAHS 明显高于正常儿童。但 Brooks 等及 Jain 等^[13-15]研究结果显示扁桃体的肥大程度与 OSAHS 严重程度无明显关联,分析认为扁桃体大小对口咽部阻塞程度影响不大。部分研究^[16-18]通过对 OSAHS 患儿行腺样体扁桃体切除后症状多有改善。在本组研究中通过对患儿不同病情选择不同手术方式,单纯扁桃体肥大患儿采用单纯扁桃体切除术,单纯性腺样体肥大患儿采用单纯腺样体切除术,双侧病变患儿行双侧扁桃体加腺样体切除术,单侧病变患儿行单侧扁桃体加腺样体切除术^[18-20]。

术后结果显示,患儿术后呼吸暂停指数与术前比较,差异明显具有统计学意义,术后优于术前,手术治疗效果得到充分认可。中、重度鼻咽气道狭窄程度比较,术后较术前疗效显著,差异明显具有统计学意义($P<0.05$)。扁桃体 I、II、III 度患儿术后伴最低血氧饱和度情况显著改善,较术前差异显著具有统计学意义($P<0.05$)。鼻咽气道狭窄程度中、重度肥大患儿术后伴最低血氧饱和度得到显著改善,较术前差异明显具有统计学意义($P<0.05$)。扁桃体 I、II、III 度患儿术后呼吸暂停低通气指数情况得到显著改善,较术前差异明显具有统计学意义($P<0.05$)。鼻咽气道狭窄程度分析,中、重度肥大患儿术后呼吸暂停低通气指数得到显著改善,较术前比较差异明显具有统计学意义($P<0.05$)。结果可以看出,儿童 OSAHS 根据不同病情采取不同手术方式,因人而异,选择个性化手术治疗方案,提高手术效果,是治疗本病的重要方法。在手术过程中尤其要对呼吸道并发症注意预防,特别是合并先天畸形、呼吸系统疾患及重症 OSAHS 患者,对于伴有中枢神经系统功能失调或肌张力减退患者应适时给予特殊护理。术中及术后早期给予静脉点滴类固醇激素,减轻术后疼痛,预防咽喉水肿增加经口进食,对术后恢复具有积极意义。对于重症 OSAHS 患者,术后早期应用持续正压同期有一定帮助,对口腔内分泌物和唾液积聚的患儿应慎用,以防正压通气作用下发生误吸。对于手术治疗不能缓解

或不耐受患儿,气管切开仍是治疗的重要手段和最后选择,亦可用于伴有心肺疾患、误吸或其他引起上呼吸道阻塞的先天性疾患,儿童患者并发症较成人多,可出现中枢性呼吸暂停等。此外,还应考虑它对患儿语言形成、生长发育及心理方面造成的严重不良影响。

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