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· 临床报道 ·

咽鼓管冠脉球囊扩张联合鼓膜置管治疗 复发性分泌性中耳炎

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摘要: **目的** 观察咽鼓管冠脉球囊扩张联合鼓膜置管治疗复发性分泌性中耳炎的疗效。**方法** 将49例(65耳)复发性分泌性中耳炎患者随机分为A、B、C组,A组为试验组,接受咽鼓管球囊扩张联合鼓膜置管治疗,共16例(22耳),B和C组是对照组,B组单纯接受咽鼓管球囊扩张治疗,共16例(21耳),C组单纯接受鼓膜置管治疗,共17例(22耳)。所有球囊扩张器械使用冠状动脉球囊。患者术后1、3、6个月定期随访。术后通过咽鼓管功能障碍7项问卷评分(the seven-item eustachian tube dysfunction questionnaire,ETDQ-7)、咽鼓管评分量表(eustachian tube score,ETS)及声导抗进行疗效评价。**结果** 3组患者术后1、3、6个月咽鼓管功能均有提高。鼓膜愈合后复查,A型鼓室图逐渐增多。A组术后3、6个月ETDQ-7评分均较B组和C组低,对照组C组较B组低。术后3、6个月ETS得分A组均高于B、C组,对照组之间C组较B组高。**结论** 对于复发性分泌性中耳炎的患者咽鼓管球囊扩张联合鼓膜置管能显著改善患者咽鼓管功能,提高分泌性中耳炎的治疗效果。冠状动脉球囊价格较常规咽鼓管球囊便宜,用于治疗分泌性中耳炎取得了同样好的疗效。

关键词:咽鼓管;球囊扩张;复发性分泌性中耳炎;冠脉球囊

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Coronary balloon dilation eustachian tuboplasty combined with the catheterization of tympanic tube membrane in the treatment of recurrent secretory otitis media

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Abstract: **Objective** To observe the effect of coronary balloon dilation eustachian tuboplasty combined with the catheterization of tympanic tube membrane in the treatment of recurrent secretory otitis media. **Methods** Forty-nine patients (64 ears) with recurrent secretory otitis media were retrospectively analyzed and followed up regularly at 1 month, 3 months and 6 months after surgery. The 49 cases were divided into three groups (group A, B and C). The patients of group A is a experimental group ($n = 16$, 22 ears), who were received eustachian tube balloon dilation combined with tympanotomy tube insertion. The B and C groups are control. The patients of group B were received only eustachian tube balloon dilation ($n = 16$, 21 ears), while the patients of group C received only the catheterization of tympanic tube membrane ($n = 17$, 22 ears). All eustachian tube dilatation were done by coronary artery balloon. The 7-item eustachian tube dysfunction questionair (ETDQ-7), acoustic immitance and eustachian tube score (ETS) were completed for evaluating the efficacy of the stated treatment. **Results** Eustachian tube function of the patients was improved in three groups at 1 month, 3 months and 6 months after surgery. Type A tympanogram was gradually increasing after the tympanic membrane healing. At 6 months after surgery, ETDQ-7 scores were lower in the group A than in the control B, C groups, and ETDQ-7 scores of the control group C were lower compared to that of the group B. At 3,6 months after surgery, ETS

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scores were higher in the group A than in the control B, C groups, and ETS scores of the control group C were higher compared to that of the group B. **Conclusion** For recurrent secretory otitis media caused by eustachian tube dysfunction, eustachian tube balloon dilation combined with the catheterization of tympanic tube membrane can significantly improve clinical symptoms. It is an effective surgical intervention for treatment of secretory otitis media. The coronary balloon is cheaper than the conventional eustachian tube balloon and has the same therapeutic effect in the treatment of secretory otitis media.

Key words: Eustachian tube; Balloon dilation; Secretory otitis media; Coronary balloon

分泌性中耳炎是常见的耳科疾病,是以听力下降、耳闷肿胀感为主要临床表现的中耳非化脓性疾病。其主要治疗方法是口服药物治疗、鼓膜穿刺、鼓室注射药物及鼓膜切开置管术等,治疗效果不佳^[1-2]。本病虽不危及生命,但病情长期不愈或反复发作,患者反复穿刺置管,严重影响患者的生活质量。分泌性中耳炎反复发作可导致鼓室内硬化病灶形成、鼓室粘连、胆脂瘤形成及并发胆固醇肉芽肿等,成为复发性难治性分泌性中耳炎,探索有效的治疗方法具有着积极的临床意义。近年来咽鼓管球囊扩张术被广泛应用于分泌性中耳炎的治疗之中,有效率在80%以上^[3-5]。本研究比较了单纯咽鼓管球囊扩张、单纯鼓膜置管与两者联合治疗慢性复发性分泌性中耳炎的疗效。研究中考虑到常规的咽鼓管球囊造价高,我们选用了冠状动脉球囊替代常规咽鼓管球囊来行咽鼓管扩张术,取得了同样的治疗效果。

1 资料与方法

1.1 临床资料

选取2017年1月~2017年12月在徐州医科大学附属医院治疗的慢性复发性分泌性中耳炎患者49例(65耳),男44例,女20例;年龄19~62岁,平均年龄40.6岁。将其随机分为试验组(A组)和对照组(B、C组),A组接受咽鼓管球囊扩张联合鼓膜置管治疗,共16例(22耳),B组单纯接受咽鼓管球囊扩张治疗,共16例(21耳),C组单纯接受鼓膜置管治疗,共17例(22耳)。术前所有患者声导抗均为B型或C型。观察组和对照组组间患者年龄、性别、病程及临床特征经比较差异无统计学意义($P > 0.05$),本研究获得医院伦理委员会批准,所有入选患者签署知情同意书。入选标准需同时满足:①18岁以上成人;②确诊为分泌性中耳炎患者,并经过正规药物治疗或鼓膜切开置管等治疗后反复发作,有2次以上置管史;③病程在1年以上;④排除鼻咽部肿瘤、腺样体肥大等有明确咽鼓管阻塞因素者。

1.2 手术方法

A组接受冠脉球囊咽鼓管扩张联合鼓膜切开置管术,手术在经口气管插管静吸复合麻醉下进行,行双侧鼻腔黏膜收缩,在0°或30°鼻内镜下暴露咽鼓管咽口,经同侧、对侧鼻腔或者经口咽部置入咽鼓管吹张管到咽口内,适当调整角度,再通过咽鼓管吹张管将冠状动脉球囊导管送入咽鼓管腔(我们选用了球囊直径4 mm,长15 mm规格冠状动脉球囊管),球囊注水加压至12Bar持续2 min,撤出导管和球囊,然后行患耳鼓膜切开,地塞米松冲洗鼓室,置入T型通风管;B组单纯行冠脉球囊咽鼓管扩张术,均在全麻下进行,手术方法同试验组咽鼓管球囊扩张;C组单纯行鼓膜切开置管术,手术在局麻下进行,手术方法与A组鼓膜切开置管同。所有患者手术顺利。

1.3 疗效评定方法

术后1、3、6个月测试所有患者声导抗,采用咽鼓管功能障碍7项问卷^[6](the seven-item eustachian tube dysfunction questionnaire, ETDQ-7)和咽鼓管评分量表^[7](eustachian tube score, ETS)。对比患者术前和术后1、3、6个月咽鼓管功能改善情况。

1.4 统计学方法

采用SPSS 14.0统计学软件,定量指标统计描述性结果采用 $\bar{x} \pm s$ 表示,计数指标统计描述采用 χ^2 检验,以 $P < 0.05$ 为差异具有统计学意义。

2 结果

所有患者均无术后并发症。术前及术后不同时期ETDQ-7评分结果对比见表1,术前及术后不同时期ETS评分结果对比见表2。结果显示3组患者术后1、3、6个月咽鼓管功能均有提高。A组术后3、6个月ETDQ-7评分均较B组和C组低,C组较B组低,差异具有统计学意义($P < 0.05$)。术后3、6个月ETS得分A组均高于B、C组,C组较B组高,差异具有统计学意义($P < 0.05$)。鼓膜愈合前声导抗为无压力,鼓膜愈合后A型声导抗逐渐增多。

表1 3组手术前后不同时期 ETDQ-7 评分比较 ($\bar{x} \pm s$)

组别	耳数	ETDQ-7 评分			
		术前	术后1个月	术后3个月	术后6个月
A组	22	5.12 ± 0.56	2.45 ± 0.52 ^{△▲}	2.35 ± 0.42 ^{△▲}	1.97 ± 0.54 ^{△▲}
B组	21	5.04 ± 0.47	3.02 ± 0.47 [△]	3.00 ± 0.41 [△]	4.05 ± 0.58 [△]
C组	22	4.89 ± 0.67	2.79 ± 0.44 [△]	2.64 ± 0.57 [△]	3.22 ± 0.61 [△]

注:与同组术前相比[△] $P < 0.05$;与B、C组相比[▲] $P < 0.05$

表2 3组手术前后不同时期 ETS 评分比较 ($\bar{x} \pm s$)

组别	耳数	ETS 评分			
		术前	术后1个月	术后3个月	术后6个月
A组	22	3.11 ± 2.25	5.05 ± 2.03 ^{△▲}	5.72 ± 1.71 ^{△▲}	6.21 ± 3.18 ^{△▲}
B组	21	2.89 ± 2.21	4.71 ± 2.13 [△]	4.64 ± 1.89 [△]	4.51 ± 2.01 [△]
C组	22	3.07 ± 2.54	5.01 ± 1.78 [△]	5.22 ± 2.03 [△]	5.37 ± 2.13 [△]

注:与同组术前相比[△] $P < 0.05$;与B、C组相比[▲] $P < 0.05$

3 讨论

咽鼓管功能障碍是复发性难治性分泌性中耳炎的最主要病因之一,咽鼓管功能恢复情况直接关系到中耳炎的治疗效果。以往针对咽鼓管功能障碍的治疗,主要有鼓室置管、咽鼓管吹张、鼻用激素、鼻腔冲洗等治疗,但远期效果不佳,易复发^[8-10]。近年来咽鼓管球囊扩张被广泛应用于咽鼓管功能障碍的治疗之中,取得了很好的治疗效果^[11-13]。咽鼓管球囊扩张联合鼓膜置管治疗分泌性中耳炎也取得了良好的效果^[14-15]。

本研究中患者共49例(65耳),随机被分为3组,咽鼓管球囊扩张联合鼓膜置管治疗组(A组)、单纯咽鼓管球囊扩张组(B组)和单纯鼓膜置管治疗组(C组),旨在了解咽鼓管球囊扩张和鼓膜置管对复发性分泌性中耳炎治疗的疗效。术后随访结果显示3组治疗均较同组术前有明显改善,术后6个月随访A组ETDQ-7评分由 5.12 ± 0.56 降至 1.97 ± 0.54 ,ETS评分由 3.11 ± 2.25 升至 6.21 ± 3.18 , $P < 0.05$,差异具有统计学意义。同时A组术后6个月ETDQ-7评分均低于B、C组,ETS评分均高于对照组,差异具有统计学意义($P < 0.05$)。术后B、C组之间比较可见单纯鼓膜置管治疗组治疗效果略好于单纯咽鼓管球囊扩张组,当然这种结论有待大样本长时间随访来验证。另外B、C组术后6个月ETDQ-7评分较术前均有降低,但比较术后1、3个月ETDQ-7评分有所回升,可能与两组部分患者复发有关。B、C组的ETS评分结果也验证了这一结论。

单纯咽鼓管球囊扩张治疗组中术后6个月4例

(5耳)患者随访时发现治疗效果不佳,随后门诊局麻下行鼓膜置管术,术中吸出鼓室积液均较黏稠。进一步回顾性分析单纯鼓膜置管治疗组治疗效果不佳者,当时鼓室积液也均为黏稠分泌物。此类患者病程长,迁延不愈,临床症状明显,咽鼓管功能障碍评分均较高,而A组中此类患者治疗效果明显优于B、C组。我们认为咽鼓管球囊扩张联合鼓膜置管治疗尤其适用于这类病程较长,病情较重的复发性分泌性中耳炎患者。

本研究采用了ETDQ-7和ETS两种方法进行咽鼓管功能测定,一方面增加了咽鼓管功能障碍诊断的准确性,同时也验证了两种评分量表具有一致性。

目前临床应用的咽鼓管球囊导管价格偏高,我们选用了冠状动脉球囊替代咽鼓管球囊行咽鼓管扩张术,取得了同样的治疗效果,并且明显降低了治疗费用,提高了患者的治疗依从性,有助于该项研究顺利完成。该研究中所有行冠状动脉球囊咽鼓管扩张术的患者手术顺利,均未发现任何并发症。

综上所述,咽鼓管冠状动脉球囊扩张联合鼓室置管术能有效地改善分泌性中耳炎患者的咽鼓管功能,对复发性难治性分泌性中耳炎的治疗效果明显优于其中单一治疗方法,其长期疗效仍需要大样本长时间随访来验证。

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