

胸前壁乳晕径路内镜甲状腺手术对免疫及甲状腺激素影响的临床对照研究

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摘要 目的 探究内镜下甲状腺手术经胸前壁乳晕径路对机体内免疫系统、甲状腺激素分泌影响情况。方法 对照组随机选取我院2010年5月~2011年5月住院行甲状腺传统手术治疗患者20例,同时随机选取广州暨南大学第一附属医院普外科经胸前壁乳晕径路手术治疗患者20例进行对照研究。结果 内镜下治疗后机体早期体液免疫、细胞免疫受一定程度抑制。内镜治疗下早期细胞免疫度抑制较开放手术轻($P<0.05$) 结论 胸前壁乳晕径路内镜甲状腺手术对免疫及甲状腺激素均有影响,把握其中变化趋势可更好的指导临床治疗。

关键词 甲状腺手术 免疫系统 甲状腺素

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Clinical Controlled Study on the Effect of Chest Wall Areola Approach Endoscopic Thyroid Operation on Immune and Thyroid Hormone

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ABSTRACT Objective: To investigate the effects of endoscopic thyroidectomy operation via anterior chest wall areola approach on the body immune system and secretion of the thyroid hormone. **Methods:** 20 cases of patients who hospitalized in our hospital during May 2010 and May 2011 and treated with traditional thyroid operation were randomly selected as the control group. 20 cases of endoscopic thyroidectomy via anterior chest wall areola approach from the first affiliated hospital of Jinan University were randomly selected as the observation group. **Results:** After endoscopic thyroidectomy treatment, early humoral immunity and cellular immunity of organism were restrained to a certain degree. Early cell immunity suppression by endoscopic treatment was lighter than by the open operation ($P<0.05$). **Conclusion:** Chest wall areola approach endoscopic thyroid operation had effect on both immune and thyroid hormones. Grasp of the changing trends can better guide clinical treatment.

Key words: Thyroid operation; Immune system; Thyroxine

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前言

甲状腺疾病以常见、多发为特征,青年女性为主。甲状腺开放传统手术术式已百余年的历史,是治疗甲状腺疾患有效、安全外科术式^[1]。随着微创外科技术的发展,甲状腺病变内镜下手术治疗对比传统手术具美容效果、术后疼痛轻、不适感少、提前下床活动、住院周期短等特点。现对我院内镜下治疗甲状腺手术行回顾分析,报道如下。

1 资料与方法

1.1 临床资料

随机选取我院2010年5月~2011年5月住院治疗的20例甲状腺病变患者为对照组。男性30例,女性70例,男女比率1:2.33 年龄20~67岁,平均年龄42.4岁,病程6天~3年,平均病程1.1年。观察组男性37例,女性63例,男女比率1:1.7 年龄21~60岁,平均年龄41.1岁,病程5天~3年,平均病程1.3年。同时随机选取广州暨南大学第一附属医院普外科经胸前壁

乳晕径路手术治疗患者20例为观察组,男性37例,女性63例,男女比率1:1.7 年龄21~60岁,平均年龄41.1岁,病程5天~3年,平均病程1.3年。

1.2 治疗方法

对住院40例甲状腺切除术患者作为研究对象,积极术前准备,备皮、签手术知情同意书、并告知手术风险、手术过程及术程。其中20例胸前壁乳晕径路内镜甲状腺切除患者作为观察组(腔镜手术组),同期的另20例传统开放甲状腺切除术患者作为对照组(传统手术组)。术后预防抗感染、换药、支持对症治疗。

1.3 评价指标

对两组患者术前、术后1天、5天细胞免疫指标(WBC、CD3+、CD8+)、体液免疫指标(IgA、IgM、IgG),甲状腺素指标(T3、T4、TSH)比较。

2 结果

2.1 两组手术患者术前、术后各天各项细胞免疫指标的比较

2组患者术前细胞免疫指标差异无意义, $P>0.05$ 其余数据统计分析详见表1。

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表 1 两组手术患者术前、术后各天各项细胞免疫指标的比较

Table 1 Table 1 Comparison of the cell immune indexes before operation and of each day postoperative of patients in two groups

	术前	术后 1 天	术后 3 天	术后 5 天
	Before the operation	1 days after operation	3 days after operation	5 days after operation
NK% 观察组	11.31±4.57	13.21±5.47*	7.48± 2.65*	8.07± 3.46*
Observation group				
对照组 Control group	12.64± 8.72	17.31± 12.49*	11.59± 6.44	9.35± 6.21*
CD3+% 观察组	76.21± 5.98	69.21± 10.34*	76.45± 6.32	75.28± 7.92
Observation group				
对照组 Control group	73.01± 9.26	59.91± 13.29*	69.71± 10.58*	70.78± 15.10
CD4+% 观察组	44.36± 7.1	38.38± 8.96*	45.67± 6.66	46.31± 7.49
Observation group				
对照组 Control group	42.96± 7.78	32.08±7.19*	42.13± 7.44	45.68± 8.02

注 * 为术后 1、3、5 天同术前差异行统计分析,P<0.05,差异有意义;

Note: * 1 is for indexes of 1, 3, 5 days after operation compared with those before operation , P<0.05, difference has significance.

2.2 两组手术患者术前、术后各天各项体液免疫指标的比较

2 组患者术前体液免疫指标差异无意义,P>0.05 其余数据统计分析详见表 2。

2.3 两组手术患者术前、术后各天甲状腺素指标的比较

2 组患者术前甲状腺素指标差异无意义,P>0.05 其余数据统计分析详见表 3。

表 2 两组手术患者术前、术后各天各项体液免疫指标的比较

Table 2 Comparison of the humoral immune indexes before operation and of each day postoperative of patients in two groups

	术前	术后 1 天	术后 3 天	术后 5 天
	Before the operation	1 days after operation	3 days after operation	5 days after operation
IgA 观察组	2.62± 1.08	2.55± 0.94	2.50± 0.94	2.36± 0.82
Observation group				
对照组 Control group	2.57± 1.06	2.59± 1.03	2.63± 1.051	2.61± 0.96
IgM 观察组	1.398± 0.68	1.39± 0.72	1.32± 0.60	1.41± 0.56
Observation group				
对照组 Control group	1.258± 0.62	1.24± 0.58	1.24± 0.58	1.23± 0.58
IgG 观察组	12.71± 2.9	11.92± 2.54*	11.10± 1.97*	11.48± 2.15*
Observation group				
对照组 Control group	13.27± 3.6	13.07± 3.15	12.5 7± 2.46	12.52± 3.25*

注 * 为术后 1、3、5 天同术前差异行统计分析,P<0.05,差异有意义;

Note: * 1 is for indexes of 1, 3, 5 days after operation compared with those before operation , P<0.05, difference has significance.

表 3 两组手术患者术前、术后各天甲状腺素指标的比较

Table 3 Comparison of the thyroxine index before operation and of each day postoperative of patients in two groups

	术前	术后 1 天	术后 3 天	术后 5 天
	Before the operation	1 days after operation	3 days after operation	5 days after operation
T3 观察组	1.06± 0.21	1.01± 0.17	1.09± 0.18	1.15±0.21
Observation group				
对照组 Control group	1.15± 0.16	1.16± 0.26	1.22± 0.42	1.39± 0.53
T4 观察组	75.56± 11.99	96.31± 18.21*	8.623± 18.41*	91.1± 15.64*
Observation group				
对照组 Control group	77.76± 1 1.56	101.99±18.65*	115.72± 34.3*	105.09±31.67*

注 * 为术后 1、3、5 天同术前差异行统计分析,P<0.05,差异有意义;

Note: * is for indexes of 1, 3, 5 days after operation compared with those before the operation P<0.05, difference has significance.

3 讨论

结合本例研究,两组患者细胞免疫检查结果示:两组患者术后第1天NK细胞数量均较术前升高,但两组之间没有明显差异。观察组患者术后第3天NK细胞较术前少,对照组对比术前差异不明显,对照组数值高于对照组。术后第5天两组NK细胞数均较术前减少,两组间无差异性。手术创伤易产生不同程度抑制机体内NK细胞活性及数量,笔者认为:两组患者术后第1天粒细胞数量升高尤以NK细胞为主是因手术后应激及炎症反应产生,术后机体常出现细胞免疫功能一过性下降,对机体创伤越大手术导致机体免疫功能降低越大,术后恢复所需越长^[2-9]。本组例中术后第3天观察组NK细胞数量较对照组少,提示免疫功能较低下,至术后5天时,两组数值无明显差别,提示观察组NK细胞数量在术后3天时呈一过性减少。

本组例中术后第1天两组患者CD3⁺T细胞均下降,其中且对照组下降程度较较观察组明显。观察组于术后3天时恢复术前水平,对照组仍低于术前,数值少于观察组。于第5天两组患者CD3⁺T水平无差异。术后第1天两组患者CD4⁺T细胞降低,对照组较观察组减少明显,术后3天时恢复至术前水平。手术治疗引起的创伤常介导不同程度免疫功能的抑制,直接使CD3⁺、CD4⁺细胞数量减少。该免疫抑制是术后患者易感性、肿瘤转移率升高的主要原因。外周血成熟T细胞以CD3⁺为代表,CD4⁺T细胞可直接使B细胞、T细胞增殖及分化,起到免疫细胞间协调作用^[10-15]。本例研究提示观察组在内镜手术治疗下可更大程度避免患者机体成熟T、B等免疫细胞损伤,可预防术后感染、减低肿瘤转移速度,维持术后免疫器官功能。

抗原刺激B细胞分泌免疫球蛋白,当机体在创伤应激下,免疫球蛋白血清浓度下降,并与创伤程度呈正相关。在B细胞损伤时使成熟期浆细胞功能受损致IgA、IgM、IgG被抑制,尤以IgM及IgG下降幅度为甚。结合本组研究,观察组术后1、3、5天IgG水平较术前明显降低,对照组术后1、3天数值水平较术前持平,第5天水平低于术前。两组患者术后IgM、IgA水平无明显变化。在创伤单方面对体液免疫影响方面,观察组及对照组在手术创伤术后恢复期内无明显差异。

结合本组研究,两组术后T3水平均与各组术前无明显差异;两组患者术后第5天FT3水平均明显高于各组术前,术后1、3天与术前水平持平。术后两组患者1、3、5天FT4、T4水平高于术前变化情况。术后两组患者TSH水平低于术前。患者术后T4、FT4水平升高由手术对甲状腺组织挤压、切割致腺泡内以胶状质形式储存甲状腺激素大剂量释放导致,甲状腺组织中以T4甲状腺激素合成为主^[16-20],故两组患者中T3、FT3水平升高幅度大。在手术应激下,机体对甲状腺激素的需求度增高,在脱碘作用下T4转化为无生物活性rT3,无益于T3水平升高。患者术后TSH水平降低,常由T4及FT4升高所致负反馈抑制引起。

综上所述,内镜下治疗后机体早期体液免疫、细胞免疫受一定程度抑制。内镜治疗下早期细胞免疫度抑制较开放手术轻,体液免疫、甲状腺激素水平改变内镜治疗与传统开放术式无明显差异。

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