doi: 10.13241/j.cnki.pmb.2022.01.025

面颈部吸脂结合脂肪移植在瘢痕整形中的临床应用观察 *

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摘要 目的:探讨与观察面颈部吸脂结合脂肪移植在瘢痕整形中的临床应用效果。**方法:**采用回顾性研究方法,选择 2017 年 8 月到 2020 年 6 月在本院诊治的面颈部瘢痕患者 78 例作为研究对象,根据随机信封抽签原则把患者分为联合组与对照组各 39 例。对照组给予面颈部吸脂治疗,联合组给予面颈部吸脂结合脂肪移植治疗,治疗观察 3 个月。**结果:**联合组治疗后瘢痕部位的疼痛分级与对照组对比差异无统计学意义(P>0.05)。两组治疗后的美容权重评分与瘢痕基底深度都低于治疗前(P<0.05),联合组低于对照组(P<0.05)。治疗后联合组的总有效率为 97.4 %,高于对照组的 82.1 %(P<0.05)。联合组治疗期间的感染、栓塞、出血、神经损害等并发症发生率为 5.1 %,低于对照组的 28.2 %(P<0.05)。**结论:**面颈部吸脂结合脂肪移植在瘢痕整形中的临床应用并不会增加患者的疼痛,还能降低瘢痕基底深度与减少并发症的发生,提高患者的美容度与总体治疗效果。

关键词:面颈部吸脂;脂肪移植;瘢痕整形;疼痛;瘢痕基底深度;美容度;并发症

中图分类号:R622;R619.6 **文献标识码:**A **文章编号:**1673-6273(2022)01-136-04

Clinical Observation of Face and Neck Liposuction Combined with Fat Transplantation in Scar Plastic Surgery*

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ABSTRACT Objective: To explore and observe the clinical application effects of face and neck liposuction combined with fat grafting in scar plastic surgery. **Methods:** Used the retrospective research methods, from August 2017 to June 2020, 78 cases of patients with facial and neck scars who were diagnosed and treated in our hospital were selected as the research objects. All the cases were divided into the combination group and control group with 39 cases each groups accorded to the random envelope drawing principle. The control group were given face and neck liposuction treatment, and the combination group were given face and neck liposuction combined with fat transplantation. The treatment were observed for 3 months. **Results:** There were no significant difference in the pain grading of scars in the combination group compared with the control group after treatment (P>0.05). The beauty weight score and the depth of scar base after treatment in the two groups were lower than before treatment (P<0.05), and thecombination group were lower than the control group (P<0.05). After treatment, the total effective rate of the combination group were 97.4 %, which were higher than 82.1 % of the control group (P<0.05). The incidence of complications such as infection, embolism, hemorrhage and nerve damage in the combination group during treatment were 5.1 %, which were lower than 28.2 % in the control group (P<0.05). **Conclusion:** The clinical application of face and neck liposuction combined with fat transplantation in scar plastic surgery will not increase the pain of the patient, but can also reduce the depth of the scar base and reduce the occurrence of complications, and improve the beauty of the patient and the overall treatment effect.

Key words: Face and neck liposuction; Fat transplantation; Scar plastic surgery; Pain; scar base depth; Beauty degree; Complications

Chinese Library Classification(CLC): R622; R619.6 Document code: A

Article ID:1673-6273(2022)01-136-04

前言

随着生活水平的不断提高，人对美丽的追求也日渐突出。而当前很多医院也广泛开展了面部整形美容,特别是当前面颈部瘢痕整形患者越来越多[1,2]。现代研究表明面颈部瘢痕多由外伤、外科手术、烧烫伤、遗传、机体局部代谢失调、感染、异物等引起,可成纤维细胞过度增生、胶原蛋白不规则堆积、胶原蛋白合成与分解失衡,从而导致真皮纤维化,最终导致该病的发生[3,4]。传统的手术疗法、激光疗法虽能达到一定的治疗效果,但是在临床上的应用受到一定的限制[5]。面颈部抽脂是一种微创、

* 基金项目:陕西省科学技术研究发展计划项目(2016SF-217)

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(收稿日期:2021-03-04 接受日期:2021-04-28)

健康、改善形态为原则的手术方法，其可减少多余脂肪，让患者改善臃肿、松弛的外形[6,7]。但是抽脂治疗在减少多余脂肪的同时，治疗周期比较长，可能造成皮肤松弛，容易让患者出现有感染、栓塞、出血、神经损害等并发症[8,9]。随着医学技术的发展，当前自体脂肪移植被广泛应用，其通过自身脂肪制备、移植，填补凹陷部位的瘢痕，从而对瘢痕具有良好改善作用[10,11]。本文观察与探讨了面颈部吸脂结合脂肪移植在瘢痕整形中的临床应用，以明确两者联合使用的价值。现总结报道如下。

1 资料与方法

1.1 研究对象

采用回顾性研究方法，选择 2017 年 8 月到 2020 年 6 月在本院诊治的面颈部瘢痕患者 78 例作为研究对象，纳入标准：研究得到了本院伦理委员会的批准；临床确诊为面颈部凹陷性瘢痕患者，瘢痕均损伤累及真皮层；年龄 18~40 岁；生命体征平稳；ASA 分级Ⅰ-Ⅱ级；无面部皮肤破损、溃疡及感染；性别不限；择期手术。排除标准：药物依赖患者；有精神疾病、酗酒史、语言障碍患者；术前访视不依从及术后失访的患者；面部恶性肿瘤患者；入院前 2 周内使用光敏性皮炎药物；伴有其他类型的皮肤疾病；入院前 3 个月内使用免疫抑制剂的患者；妊娠与哺乳期妇女；瘢痕疙瘩或不稳定瘢痕者；家族中存在瘢痕体质或色素沉着倾向者。

根据随机信封抽签原则把患者分为联合组与对照组各 39 例，两组患者的瘢痕部位、瘢痕面积、性别、年龄、体质量指数（body massindex，BMI）、收缩压（systolic blood pressure，SBP）、舒张压（diastolic blood pressure，DBP）、美国麻醉医师协会（American Society of Anesthesiologists，ASA）分级等对比差异无统计学意义（P>0.05），见表 1。

表 1 两组一般资料对比

Table 1 Comparison of two general data

Groups	n	ASA classification (Ⅰ/Ⅱ)	Surgical site (frontal/cheek/other)	BMI (kg/m^2)	Gender (M/F)	Age (years)	Scar area (cm^2)	SBP (mmHg)	DBP (mmHg)
Joint group	39	6/33	22/10/7	22.74±2.18	8/31	34.87±2.11	4.29±0.36	124.11±13.47	75.29±4.66
Control group	39	5/34	21/11/7	22.17±3.71	9/30	33.65±1.82	4.33±0.21	123.98±12.75	75.98±5.11

1.2 治疗方法

对照组：给予面颈部吸脂治疗，术前详细询问病史，设计治疗部位，常规手术区域消毒。手术区域麻醉，先注射脂肪深层，后注射真皮层深部。面颈部用针头穿刺形成隧道，离浅筋膜层，连接射频治疗仪的负压吸引管，功率在 35 W 左右，实施监测皮肤表面及温度，当脂肪层较薄时，可调低功率。采用比较缓慢的速度于浅筋膜深层负压吸引出液化脂肪，操作时射频操作仪的闭环反馈装置发出声音信号，可见溶解后的脂肪液排出。术后缝合切口，加压包扎手术区域 24~72 h，口服抗菌药物 3~5 d。

联合组：在对照组治疗的基础上给予自体脂肪移植治疗，术前先标记瘢痕治疗部位的范围，供脂区为腹部，于皮下脂肪层负压抽吸适量脂肪；将获取的脂肪过滤、纯化、清洗后制成乳糜。瘢痕治疗部位采用局部麻醉，于瘢痕一端切开 0.5 cm，采用注射器将乳糜脂肪于瘢痕内边退针边注射，平均每个部位的注射剂量为 12 mL，检查无明显出血及无局部血运障碍后，缝合切口并进行无菌纱布包扎。

上述治疗都为 1 个月治疗 1 次，连续治疗 3 个月。

1.3 观察指标

(1)在治疗前后进行美容权重评分(Echelle devaluation clinique descicatrices dacnd，ECCA)，根据瘢痕性质与权重进行评分，分数越高，瘢痕越严重。(2)在治疗后依据 WHO 疼痛程度分级标准对瘢痕部位进行疼痛评定，Ⅲ级：剧烈疼痛；Ⅱ级：疼痛显著仍可忍受；Ⅰ级：轻微疼痛可忍受；0 级：无疼或稍感不适。(3)在治疗前后进行瘢痕基底深度测定。(4)记录两组在治疗期间出现的并发症情况，包括感染、栓塞、出血、神经损害等。(5)在治疗后进行总体疗效评价，显效：疗效指数 >75 %；有效：50 %< 疗效指数≤ 75 %；改善：25 %< 疗效指数≤ 50 %；无效≤ 25 %。总有效率 =(显效＋有效)例数 / 总例数×100 %。

1.4 统计方法

数据统计分析过程中应用的软件是 SPSS 25.00，通过例数或百分比表示计数资料，均数±标准差来表示正态分布的计量资料，中位数来表示非正态资料，计量数据的对比为 t 检验或重复测量设计的方差分析，计数数据的对比为卡方 χ^2 分析，检验水准为 α=0.05，以 P<0.05 为差异有统计学意义。

2 结果

2.1 疼痛情况对比

联合组治疗后瘢痕部位的疼痛分级与对照组对比差异无统计学意义（P>0.05），见表 2。

表 2 两组治疗后瘢痕部位的疼痛分级对比(例，%)

Table 2 Comparison of pain grading of scars between the two groups after treatment (n,%)

Groups	n	Level 0	Level Ⅰ	Level Ⅱ	Level Ⅲ
Joint group	39	4(10.3%)	26(66.7%)	8(20.5%)	1(2.6%)
Control group	39	5(12.8%)	26(66.7%)	6(15.4%)	2(5.1%)

2.2 美容权重评分与瘢痕基底深度变化对比

两组治疗后的美容权重评分与瘢痕基底深度都低于治疗前(P<0.05),联合组低于对照组(P<0.05),见表 3。

表 3 两组治疗前后美容权重评分与瘢痕基底深度变化对比($\bar{x}\pm s$)

Table 3 Comparison of cosmetic weight score and scar base depth change between the two groups before and after treatment ($\bar{x}\pm s$)

Groups	n	Beauty Weight Score (Score)		Scar base depth (μm)	
		Pretherapy	Post-treatment	Pretherapy	Post-treatment
Joint group	39	69.24±5.44	31.85±3.86*#	159.28±15.86	73.55±6.10*#
Control group	39	69.28±4.18	46.92±4.44#	160.29±18.02	98.72±12.68#

Note: Compared with the control group, *P<0.05, compared with the pretherapy, #P<0.05.

2.3 总有效率对比

治疗后联合组的总有效率为 97.4 %,高于对照组的 82.1 %(P<0.05),见表 4。

表 4 两组治疗总有效率对比(例,%)

Table 4 Comparison of the total effective rate of treatment between the two groups (n, %)

Groups	n	Excellence	Effective	Better	Invalid	Total effective rate
Joint group	39	34	4	1	0	38(97.4%)*
Control group	39	24	8	5	2	32(82.1%)

Note: Compared with the control group, *P<0.05.

2.4 并发症情况对比

联合组治疗期间的感染、栓塞、出血、神经损害等并发症发生率为 5.1 %,低于对照组的 28.2 %(P<0.05),见表 5。

表 5 两组治疗期间并发症情况对比(例,%)

Table 5 Comparison of complications during treatment between the two groups (n, %)

Groups	n	Infect	Embolism	Haemorrhage	Nerve damage	Total
Joint group	39	1	0	1	0	2(5.1%)*
Control group	39	4	3	2	2	11(28.2%)

Note: Compared with the control group, *P<0.05.

3 讨论

面颈部为人体最暴露部位，由于内在与外在因素的影响，当前面部整形美容人数也逐年增加[12,13]。由于整形效果直接关系到人的五官和容貌,为此对于治疗的要求比较高[14]。瘢痕与当前审美观背道而驰,特别是当组织臃肿、松弛时,多数患者伴随有脂肪堆积,可影响患者的美观。并且有部分患者当发生面部凹陷性瘢痕时,伴随有患者面部皮损发生,可对患者的身心健康都造成严重负面影响。面颈部疤痕在传统上多采用手术或激光治疗,但是手术治疗对于患者的创伤比较大,而激光治疗很难持续改善患者的预后。本研究显示联合组治疗后瘢痕部位的疼痛分级与对照组对比差异无统计学意义;两组治疗后的美容权重评分与瘢痕基底深度都低于治疗前，联合组低于对照组,表明面颈部吸脂结合脂肪移植在瘢痕整形中的临床应用并不会增加患者的疼痛,还能降低瘢痕基底深度,提高患者的美容度。此次研究结论与 Jaspers MEH[15]与 Juhl AA[16]等学者的研究类似。从机制上分析,吸脂治疗具有操作简单、方便有效等特点,但是术中容易损伤血管,部分患者吸脂后皮肤松弛加重[17,18]。射频吸脂技术为利用射频电流以及负压吸引,射频电流通过组织消融并引出脂肪;特别是持续的热刺激可凝固小血管,造成三维收缩和软组织收缩,并减少术中出血[19]。自体脂肪移植能够避免异体填充组织导致的免疫性反应,具有取材方便、来源广泛等特点,从而提高治疗的临床安全性。特别是该方法能够促进胶原合成、改善缺损部位微循环与增加真皮厚度[20,21]。有研究显示脂肪乳化后能增加脂肪组织与瘢痕内部受区之间的接触面积,改善瘢痕组织结构,也有助于脂肪成活,从而改善瘢痕组织内部结构及病理状态[22,23]。

射频能够消融脂肪，也能负压吸引出液化的脂肪组织,具有水肿轻、手术出血少、副作用少等特点[24]。但是在治疗过程中伴有全身和局部并发症的可能,在临床上的应用具有一定的限制[25]。伴随追求年轻化的人群的增多,当前很多患者逐渐追求更安全、精准的瘢痕整形方法[26,27]。本研究显示联合组治疗期间的感染、栓塞、出血、神经损害等并发症发生率为 5.1 %,低于对照组的 28.2 %,与 Onur Erol O[28]与 Pallua N[29]等学者的研究类似。从机制上分析,自体脂肪的组织相容性好,取材非常方便,可避免排斥反应和过敏反应,可以去除身体其他部位多余的脂肪,不会有瘢痕遗留。并且其能改善皮肤的弹性,也能填充面部凹陷,从而减少并发症的发生。但是在临床上也要进行小心操作,在临床脂肪注射过程中,动作轻柔缓慢,尽量使用钝针,使用无菌手术器械,避免大的脂肪颗粒堆积和超量注射。有研究

显示间断跳跃式、多层次、多隧道多点注射的方式可以有效的减少注射时产生的机械力对脂肪细胞造成的损伤，增大了脂肪细胞与面部凹陷区的接触面积，提高移植的脂肪细胞的成活率，也降低了脂肪液化的发生率[30]。

随着现代科技医疗水平的发展与人们对美的追求与日俱增，使得整形美容手术当前得以广泛发展。但是由于各种因素的影响，由于整形美容引起的医疗纠纷也逐年增多。以 Van Turnhout AA[31]为代表的学者认为当前瘢痕整形的要求已从修复重建领域的软组织凹陷，发展到面部年轻化与器官轮廓改善。本研究显示治疗后联合组的总有效率为 97.4 %，高于对照组的 82.1 %。从机制上分析，两者联合使用能够通过提高脂肪组织移植物的存活率，提高面部皮损部位组织的完整性和平整度，促进局部瘢痕组织基底膜的新生和修复过程，提高基底膜细胞的新生水平，减轻脂褐素的沉积，从而促进新生组织的形成[32,33]。不过本研究而已有一定的不足，病例数量比较少，两种治疗方法的操作规范方面还缺少专家共识，将在后续研究中进行深入探讨。

总之，面颈部吸脂结合脂肪移植在瘢痕整形中的临床应用并不会增加患者的疼痛，还能降低瘢痕基底深度与减少并发症的发生，提高患者的美容度与总体治疗效果。

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(下转第 163 页)

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