

[DOI]10.12016/j.issn.2096-1456.2022.02.008

· 临床研究 ·

Nd: YAG 激光联合阿昔洛韦治疗唇疱疹临床效果观察

周丽静, 戴东晓, 石亚红

石家庄市第二医院口腔科, 河北 石家庄(050000)

【摘要】 目的 探究Nd: YAG激光联合阿昔洛韦乳膏治疗唇疱疹的临床效果。方法 唇疱疹患者72例,按照随机数字表法分为观察组36例,对照组36例。Nd: YAG激光联合3%阿昔洛韦乳膏治疗为观察组,单纯涂抹3%阿昔洛韦乳膏治疗为对照组。比较两组的总有效率,结痂、脱痂、止痛时间及生活质量评分。结果 治疗7 d对照组总有效率为75%(27/36),观察组总有效率为94.4%(34/36),差异具有统计学意义($P < 0.05$);相较于对照组,观察组的结痂、痂皮脱落和止痛时间较短,差异有统计学意义($P < 0.05$);相较于对照组,观察组的患者的生活质量评分较高,差异有统计学意义($P < 0.05$)。结论 采用Nd: YAG激光联合3%阿昔洛韦乳膏治疗唇疱疹,能促进患者的康复。

【关键词】 唇疱疹; 单纯疱疹; Nd: YAG激光; 低能量激光; 阿昔洛韦; 临床疗效; 生活质量

【中图分类号】 R78 **【文献标志码】** A **【文章编号】** 2096-1456(2022)02-0123-04

【引用著录格式】 周丽静,戴东晓,石亚红. Nd: YAG激光联合阿昔洛韦治疗唇疱疹临床效果观察[J]. 口腔疾病防治, 2022, 30(2): 123-126. doi:10.12016/j.issn.2096-1456.2022.02.008.



微信公众号

Clinical effect observation of Nd: YAG laser combined with acyclovir in the treatment of herpes labialis ZHOU Lijing, DAI Dongxiao, SHI Yahong. Department of Stomatology, Shijiazhuang Second Hospital, Shijiazhuang 05000, China

Corresponding author: ZHOU Lijing, Email: zhoulijingkouqiang@163.com, Tel: 86-311-87023402

【Abstract】 Objective To investigate the clinical efficacy of Nd: YAG laser combined with 3% acyclovir cream in the treatment of herpes labialis. **Methods** A total of 72 patients with herpes labialis were enrolled. According to the random number table method, the patients were divided into an observation group and a control group with 36 patients in the observation group and 36 patients in the control group. The Nd: YAG laser combined with 3% acyclovir cream was administered to the observation group, while 3% acyclovir cream was administered to the control group. The total effective rate, scab, scab removal, analgesic time, and quality of life were compared between the two groups. **Results** 7 days after treatment, the total effective rate of clinical treatment in the control group was 27 patients (75%), and that in the observation group was 34 patients (94.4%); the contrast difference was statistically significant ($P < 0.05$). Compared with those in the control group, the crusting, prolapse and analgesic time of the observation group were shorter, and the differences were statistically significant ($P < 0.05$). Compared with the control group, the observation group had higher quality of life scores, and there was a statistical significance ($P < 0.05$). **Conclusion** For patients with herpes labialis, using Nd: YAG laser combined with 3% acyclovir cream treatment can significantly improve the quality of life of patients and accelerate the speed of patient rehabilitation.

【Key words】 herpes labialis; herpes simplex; Nd: YAG laser; low energy laser; acyclovir; clinical efficacy; the quality of life

J Prev Treat Stomatol Dis, 2022, 30(2): 123-126.

【Competing interests】 The authors declare no competing interests.

【收稿日期】 2021-04-05; **【修回日期】** 2021-09-31

【基金项目】 河北省医学科学研究重点课题指令计划项目(20190155)

【通信作者】 周丽静, 主治医师, 硕士, Email: zhoulijingkouqiang@163.com, Tel: 86-311-87023402

This study was supported by the grants from Hebei Province Medical Science Research Key Topic, Instruction Plan (No.20190155).

唇疱疹主要为单纯疱疹病毒(herpes simplex virus, HSV)-1型病毒感染所致,在原发感染消退后,受到发热、劳累等刺激因素于同一部位复发,多发生于口角、唇红附近。发病时使患者进食、言语等灼痛更明显,对患者美观造成一定的影响。其治疗多采用阿昔洛韦及其衍生物等抗病毒药物,但阿昔洛韦的间歇性给药可导致耐药性^[1]。目前,激光治疗在医学领域得到了广泛的应用,近年研究表明低能量激光可以作为唇疱疹的潜在治疗选择^[2-3]。本研究采用Nd:YAG激光联合阿昔洛韦乳膏治疗唇疱疹患者,取得较好的临床疗效,现报道如下。

1 资料和方法

1.1 一般资料

选取2019年1月至2020年1月在石家庄第二医院口腔科就诊、病程均在3 d内且未曾治疗的唇疱疹患者共72例,按照随机数字表法分为观察组36例及对照组36例。观察组患者疱疹采用Nd:YAG激光联合阿昔洛韦治疗;对照组采用单纯涂擦阿昔洛韦治疗。患者均知情同意。

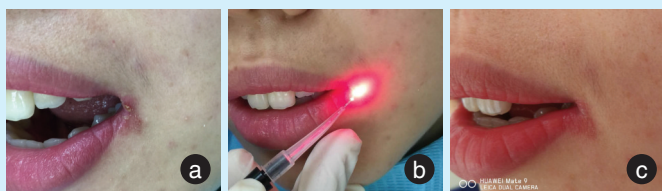
排除标准:唇疱疹合并其他各类口唇疾病;患有精神疾患;伴随严重器质性障碍疾病者;妊娠妇女,甲功亢进或减退患者禁忌。

纳入标准:全部患者均符合《口腔黏膜病学》唇疱疹的临床诊断标准^[4],无激光治疗禁忌证及药物过敏史。其中观察组年龄18~76岁,平均(51.6 ± 1.2)岁,男21例,女15例;对照组年龄19~73岁,平均(50.5 ± 1.4)岁,男20例,女16例。两组一般资料差异无统计学意义。

1.2 方法

1.2.1 对照组 在病损区用阿昔洛韦乳膏进行涂擦。在口唇疱疹的部位用干棉球涂抹适量的3%阿昔洛韦乳膏(国药准字:H20066173,湖南五洲通药业有限责任公司,规格:10 g),4~6次/d,期间并未使用其他治疗手段,未服用其他药物进行治疗,直至痊愈。

1.2.2 观察组 Nd:YAG激光联合阿昔洛韦治疗。首日对病损区进行Nd:YAG激光治疗,激光治疗2次/d,间隔4 h。激光治疗后涂擦3%阿昔洛韦乳膏。2次激光照射完成后,不再进行激光治疗,每日仅在病损区用3%阿昔洛韦乳膏进行涂擦(参照1.2.1方法)。激光照射过程中保持探头光源垂直于病损区;照射距离2~3 mm;对病损区进行均匀照射,避免长时间停留在特定位置,照射时间30~60 s,激光照射后病损区生成一层白膜。Nd:YAG激光参数为:频率15 Hz;脉冲能量60~80 mJ;功率1.0 W(图1)。



a: a twenty-three-year-old female patient with early-stage of herpes labialis, no treatment was given; b: the lesion area was first irradiated by laser, and then acyclovir was applied; c: four days after treatment, no more active herpes areas were observed, and the mucosa of the lower lip had nearly recovered

Figure 1 Herpes labialis patient treated with Nd:YAG laser combined with 3% acyclovir cream

图1 Nd:YAG激光联合3%阿昔洛韦乳膏治疗唇疱疹

1.3 观察指标

记录各组患者治疗前、后的各项观察指标,包括结痂时间、脱痂时间、疼痛消失时间、生活质量情况(依据生活质量调查问WHOQOL-BREF表,每项评分为100分,评分越高代表患者生活质量越高^[5])。由于唇疱疹有自限性,一般病程约1~2周自愈,故在治疗后7天评定疗效。

疗效评定参照《常见疾病诊断依据与疗效判断标准》^[6]。痊愈:自觉症状(灼热、瘙痒、刺痛等)消失,皮损消失,皮肤恢复正常,或可留有暂时性浅淡的色素沉着;显效:自觉症状基本消失,皮损有结痂尚未脱落或有皮岛生成;有效:自觉症状减轻,皮损范围有所缩小;无效:自觉症状和皮损均无明显变化或有所加重。

总有效率 = (痊愈+显效+有效)/总例数*100%。

1.4 统计学处理

应用SPSS 17.0软件,卡方检验比较各组总有效率;计量数据的比较采用t检验, $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 两组唇疱疹患者治疗期间结痂、脱痂、疼痛消失时间比较

观察组的结皮、痂皮脱落和疼痛消失时间

均短于对照组,差异有统计学意义($P < 0.05$) (表1)。

2.2 两组唇疱疹治疗总有效率比较

观察组总有效率94.4%(34/36)高于对照组75%(27/36),差异有统计学意义($P < 0.05$)(表2)。

2.3 两组生活质量比较

观察组各项生活质量评分高于对照组,差异有统计学意义($P < 0.05$)(表3)。

2.4 不良反应

两组患者在治疗过程中均未出现不良反应。

表1 两组唇疱疹患者治疗期间结痂、脱痂、疼痛消失时间比较

Group	n	Scab time/d	Scab removal time/d	Pain relief time/d
Observation group	36	2.1 ± 0.91	4.9 ± 1.57	1.5 ± 1.01
Control group	36	4.8 ± 1.08	6.9 ± 1.82	3.4 ± 1.50
t		6.73	5.46	6.30
P		< 0.05	< 0.05	< 0.05

表2 两组唇疱疹患者治疗7 d临床效果比较

Case	Quantity	Recovery	Excellence	Effective	Invalid	Total effective[n (%)]
Observation group	36	16	11	7	2	34(94.4)
Control group	36	11	9	7	9	27(75.0)
χ^2						5.41
P						< 0.05

表3 两组生活质量比较

Group	n	Mental state	Physiological function	Emotion function	Social function
Observation group	36	74.01 ± 9.81	73.80 ± 9.12	74.45 ± 9.19	77.67 ± 9.41
Control group	36	65.74 ± 7.70	66.86 ± 8.78	68.05 ± 8.01	66.17 ± 7.11
t		3.57	2.87	2.89	5.09
P		< 0.05	< 0.05	< 0.05	< 0.05

3 讨论

唇疱疹由人类单纯疱疹病毒^[7]感染引起,当皮肤黏膜感染后,该病毒即在上皮细胞中复制。常由各种刺激引起,如压力、发热、阳光照射、极端温度、紫外线辐射、免疫抑制,或外伤等因素致使免疫力下降,激活病毒而发病。本疾病临床过程由前驱症状开始,如灼烧或肿胀,接着出现水泡,疱破裂后而糜烂,渗液,逐渐干燥结痂,全程经过约1~2周时间,愈合后可留有暂时性色素沉着。其好发部位一般位于皮肤黏膜交界处,如口角、唇缘、鼻孔附近也有发生。

唇疱疹常规治疗主要采用止痛、抗病毒治

疗。阿昔洛韦药物是现代医学使用化学合成的抗病毒药物,对防治HSV1、HSV2有良好临床效果,其可直接进入病毒感染的细胞,磷酸化后竞争抑制病毒DNA聚合酶,使得被感染细胞的DNA链延伸中断,从而治疗疱疹病毒^[8]。本研究使用阿昔洛韦软膏治疗唇疱疹7 d时皮损结痂的时间为4.8 d,脱痂时间为6.9 d,低于Horwitz等^[9]报道的单纯涂擦阿昔洛韦治疗复发性唇疱疹中皮损结痂时间3.5 d,脱痂时间5.9 d,考虑可能与种族不同有关,另外笔者在研究中发现唇疱疹病损区面积大小也影响治疗效果,目前尚未有相关文献,需要进一步研究。

本研究表明, Nd:YAG 激光联合 3%阿昔洛韦乳膏治疗唇疱疹优于单纯涂擦 3%阿昔洛韦乳膏治疗:总有效率高,结皮、痂皮脱落和疼痛消失时间均较短。研究报道,单用抗病毒药物难以及时改善患者疼痛症状,且皮损结痂及水肿消退较慢^[10]。Nd:YAG 激光波长 1 064 nm,属近红外不可见光,光纤纤细柔软,可弯曲及改变方向,有利于照射到口腔内各个位置,方便治疗,其特性为:可改变或破坏微生物大分子原有结构致其死亡,消炎杀菌作用强,且可加快病损区局部血液循环,增强组织代谢,减轻黏膜受刺激后引发的充血水肿症状,促进病变组织愈合,缩短疗程^[11-12]。Nd:YAG 激光照射可以使细胞膜钠/钾泵的转运受到干扰,影响细胞膜的渗透性,抑制局部神经的传导,缓解患者的痛感^[13];Nd:YAG 激光的选择性光热特性^[14],不仅可分解黑色小体,而且可以明显抑制黑色素的合成,使色斑淡化、消失^[15]。同时,对皮肤真皮层进行加热,温度达到一定程度后能促进皮下胶原纤维及弹性纤维增生,促使皮肤弹性恢复^[16]。

本研究两组治疗中均未出现不良反应。

综上,利用 Nd:YAG 激光的特性,辅助治疗唇疱疹,可以取得了较好的疗效,具有临床应用推广价值。

[Author contributions] Zhou LJ designed the study, processed the ressearch, analyzed the data, and wrote the article. Dai DX, Shi YH assisted the research performing. All authors read and approved the final manuscript as submitted.

参考文献

- [1] D'aiuto L, Williamson K, Dimitrion P, et al. Comparison of three cell-based drug screening platforms for HSV-1 infection[J]. *Antiviral Res*, 2017, 142: 136 - 140. doi: 10.1016/j.antiviral. 2017. 03.016.
- [2] Al-Maweri SA, Kalakonda B, Alaizari NA, et al. Efficacy of low-level laser therapy in management of recurrent herpes labialis: a systematic review[J]. *Lasers Med Sci*, 2018, 33(7): 1423 - 1430. doi: 10.1007/s10103-018-2542-5.
- [3] Capodiferro S. Comment on "efficacy of low-level laser therapy in management of recurrent herpes labialis: a systematic review"[J]. *Lasers Med Sci*, 2019, 34(4): 841. doi: 10.1007/s10103-018-2592-8.
- [4] 陈谦明,周曾同. 口腔黏膜病学[M]. 3版. 北京:人民卫生出版社, 2008: 16-18.
Chen QM, Zhou ZT. *Oral mucosal disease*[M]. 3rd ed. Beijing: People's Medical Publishing House, 2008: 16-18.
- [5] 黄宇光,徐建国. 神经病理性疼痛临床诊疗学[M]. 北京:人民卫生出版社, 2010: 309-312.
Huang YG, Xu JG. *Clinical diagnosis and treatment of neuropathological pain*[M]. Beijing: People's Medical Publishing House, 2010: 309-312.
- [6] 湖南省卫生厅. 常见疾病诊断依据与疗效判断标准[S]. 长沙:湖南科学技术出版社, 1998: 852.
Hunan Provincial Health Department. *Diagnosis basis and efficacy judgment criteria of common diseases*[S]. Changsha: Hunan Science and Technology Press, 1998: 852.
- [7] Bastos M, Figueiredo F, Macedo AP, et al. Local anesthetic improves individuals affected with herpes simplex type 1 labialis[J]. *J Med Virol*, 2020, 92(12): 1-7. doi: org/10.1002/jmv.25982.
- [8] Wei L, Zhao J, Wu W, et al. Decreased absolute numbers of CD3+ T cells and CD8+ T cells during aging in herpes zoster patients[J]. *Sci Rep*, 2017, 7(1): 15039. doi: 10.1038/s41598-017-15390-w.
- [9] Horwitz E, Pisanty S, Czerninski R, et al. A clinical evaluation of a novel liposomal carrier for acyclovir in the topical treatment of recurrent herpes labialis[J]. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, 1999, 87(6): 700-705. doi: 10.1016/s1079-2104(99) 70164-2.
- [10] Klaric JS, Beltran T, Mcclenathan BM. An association between herpes zoster vaccination and stroke reduction among elderly individuals[J]. *Military Med*, 2019, 184(3/4): 126 - 132. doi: 10.1093/milmed/usy343.
- [11] Diagourtas A, Petrou P, Georgalas I, et al. Bleb failure and intraocular pressure rise following Nd:YAG laser capsulotomy[J]. *BMC Ophthalmol*, 2017, 17(1): 18. doi: 10.1186/s12886-017-0408-4.
- [12] Szezerbaty S, De Oliveira RF, Pires-Oliveira D, et al. The effect of low-level laser therapy (660 nm) on the gene expression involved in tissue repair[J]. *Laser Med Sci*, 2018, 33(2): 315 - 321. doi: 10.1007/s10103-017-2375-7.
- [13] Suter VGA, Sjölund S, Bornstein MM. Effect of laser on pain relief and wound healing of recurrent aphthous stomatitis: a systematic review[J]. *Laser Med Sci*, 2017, 32(4): 953 - 963. doi: 10.1007/s10103-017-2184-z.
- [14] Li D, Zhang H, Chen B, et al. Experimental investigations on thermal effects of a long-pulse alexandrite laser on blood vessels and its comparison with pulsed dye and Nd:YAG lasers[J]. *Laser Med Sci*, 2020, 35(1): 1555-1566. doi: 10.1007/s10103-020-02981-9.
- [15] Limpjaroenviriyakul N, Jurairattanaporn N, Kamanamool N, et al. Low - fluence Q - switched Nd:YAG 1064 - nm laser *versus* Q - switched Nd:YAG 532-nm laser in the treatment of hyperpigmented lips: a prospective, randomized, controlled, evaluator-blinded trial[J]. *Lasers Med Sci*, 2020, 35(1): 165-171. doi: org/10.1007/s10103-019-02814-4.
- [16] Agarwal M, Velaskar S. Laser skin rejuvenation with fractional 1064 Q-switched Nd:YAG in 252 patients: an Indian experience [J]. *Cosmet Dermatol*, 2020, 19(2): 382 - 387. doi: org/10.1111/jocd.13050.

(编辑 张琳,曾曙光)



官网