

超声引导下肿胀麻醉液辅助腔内激光治疗下肢静脉曲张

高应鸿,张面焕

解放军第一医院,甘肃 兰州 730030

【摘要】目的:探讨超声引导下肿胀麻醉液辅助腔内激光治疗下肢静脉曲张的临床效果。**方法:**回顾性分析23例采用超声引导下肿胀麻醉液辅助腔内激光治疗下肢静脉曲张患者的临床资料,观察患者术中、术后疼痛情况,出院后随访下肢浅静脉曲张临床症状、体征变化,色素沉着、湿疹、溃疡等皮肤改变情况。**结果和结论:**23例患者术中VAS评分2~5分,平均2.8分,术后6 h VAS评分1~4分,平均1.3分。23例患者均在术后2 h内下床活动,术后1~2 d出院,术后3~6月内有19例患者得到随访,被随访患者下肢浅静脉曲张临床症状、体征均消失,色素沉着、湿疹、溃疡等皮肤改变者均不同程度减轻,其中9例患者彩超检查均未见静脉再通及复发。

【关键词】超声引导;肿胀麻醉液;腔内激光;下肢静脉曲张

【中图分类号】R318.51;R543.6

【文献标志码】A

【文章编号】1005-202X(2020)08-1045-02

Ultrasound-guided endovascular laser therapy assisted by tumescent anesthetic solution in treating varicose veins in lower extremities

GAO Yinghong, ZHANG Mianhuan

the First Hospital of PLA, Lanzhou 730030, China

Abstract: Objective To investigate the clinical effect of endovascular laser therapy which is guided by ultrasound and is assisted by tumescent anesthetic solution in the treatment of varicose veins in lower extremities. **Methods** The clinical data of 23 patients with varicose veins in lower extremities treated with ultrasound-guided and tumescent anesthetic solution-assisted endovascular laser therapy were analyzed retrospectively. The intraoperative and postoperative pain was evaluated. After discharge, the changes in the clinical symptoms and signs of superficial varicose veins in lower extremities, and the remission of skin lesions such as pigmentation, eczema and ulcer were also analyzed. **Results and conclusion** The intraoperative VAS scores of 23 patients were 2-5 points (mean 2.8 points), and the VAS scores were 1-4 points (mean 1.3 points) at 6 hours after the operation. Twenty-three patients could get out of bed at 2 hours after operation and were discharged on 1-2 d post-operatively. The postoperative 3-6 months follow-up showed that the clinical symptoms and signs of superficial varicose veins in lower extremities were disappear in 19 patients, and the skin lesions such as pigmentation, eczema and ulcers were alleviated to varying degrees, and that among the 19 patients, 9 patients had no venous recanalization and recurrence in color Doppler ultrasound examination.

Keywords: ultrasound-guided; tumescent anesthetic solution; endovascular laser; varicose veins in lower extremities

前言

下肢静脉曲张是血管外科常见疾病,可供选择的治疗方式较多,外科治疗效果更明确。随着各种技术的发展,出现了多种微创治疗方式。解放军第一医院2019年3月~2020年1月期间共行超声引导下肿胀麻醉液辅助腔内激光治疗下肢静脉曲张23例,现报道如下。

1 资料与方法

1.1 临床资料

患者23例(双下肢患者只选择较严重的患肢进行手术),其中右下肢10例,左下肢13例,男17例,女6例;年龄26~68岁,中位年龄44岁。病程3~15年,平均6年。23例均表现为浅静脉曲张,超声检查证实深静脉血流通畅,无血栓形成,无髂静脉压迫综合征等静脉闭塞性疾病,患肢有水肿但没有皮肤改变11例,有皮肤改变如色素沉着、静脉湿疹及皮肤硬化8例,有皮肤改变和已愈合的溃疡3例,有皮肤改变和正在发作的溃疡1例。23例患者均行心电图、胸部X线等常规检查。

【收稿日期】2020-04-16

【作者简介】高应鸿,硕士,副主任医师,E-mail: gslzgyh@163.com

1.2 治疗方法

患者取仰卧位,常规消毒铺单,局部利多卡因浸润麻醉后,在患肢膝关节内侧上方行大隐静脉穿刺,单弯导管在5F导管鞘和导丝配合下导入大隐静脉至隐股汇合处下方,腹股沟韧带下方局部麻醉后行大隐静脉高位结扎术。超声引导下将肿胀麻醉液注入隐筋膜间隙内。肿胀麻醉液的配制方法如下:40 mL生理盐水,2%利多卡因10 mL,1:1 000的肾上腺素0.4 mL,8.4%碳酸氢钠4 mL。激光治疗采用1 470 nm半导体激光器连续模式,能量范围为6~8 W。撤出光纤前超声确认大隐静脉已经闭塞。术后立即应用弹力绷带进行加压包扎。术后24 h更换弹力袜,嘱患者术后第1周内24 h穿弹力袜,第2周起可只在白天穿,持续3周以上。

2 结果

根据VAS评分标准(无痛计0分,轻度疼痛计1~3分,中度疼痛计4~6分,剧痛计7~9分,不能忍受的剧痛计10分),23例患者术中VAS评分2~5分,平均2.8分,术后6 h VAS评分1~4分,平均1.3分。23例患者均能在术后2 h内下床活动,术后1~2 d出院,术后3~6月内有19例患者得到随访,被随访患者下肢静脉曲张临床症状、体征均消失,色素沉着、湿疹、溃疡等皮肤改变者均不同程度减轻,其中9例患者彩超检查均未见静脉再通及复发。本治疗方法在术中、术后镇痛效果确切,近期临床治疗效果令人满意。

3 讨论

下肢静脉曲张是血管外科常见疾病,手术是其主要治疗方式。传统的大隐静脉高位结扎结合大隐静脉抽剥术历史较长,该术式疗效肯定但创伤大、出血量多、术后影响美观^[1]。激光是一种较早用于下肢静脉曲张的微创治疗方法,与传统手术相比具有一定的优势,但该术式是一种基于热损伤的物理技术,如果不辅助全身麻醉或者硬膜外麻醉,术中、术后疼痛明显,且容易损伤血管周围组织和神经^[2]。超声引导下辅助使用肿胀麻醉液不但能显著减轻术中、术后疼痛,在达到充分闭合静脉管壁的同时能有效避免周围组织的热损伤。肿胀麻醉液广泛应用到很多方面,除静脉曲张以外,还用于其他血管、乳腺、整形手术等^[3-4]。

肿胀麻醉液中的肾上腺素能减少出血,利多卡因与碳酸氢钠能明显减轻疼痛。在超声引导下大隐静脉周围注射肿胀麻醉液可沿静脉周围间隙浸润,压迫静脉后增宽周围筋膜间隙,达到散热的同时保护激光治疗中周围组织免受热损伤。Pannier等^[5]进行前瞻性随机对照研究,结果证实肿胀麻醉液的温度不影响闭塞率,冷肿麻液组的患者倾向于更少疼痛,并且止痛药用量明显减少。国内学者近期更为详细的相关研究,也证实了肿胀麻醉液在腔内激光治疗中所具有的独特优势^[6-7]。Tarhan等^[8]试验两组不同温度(4℃和24℃)的肿胀麻醉液,认为冷肿胀麻醉(4℃)在激光治疗中更具保护效应。所不同的是笔者选择的病例中因为均行大隐静脉高位结扎,可能导致患者术中术后的VAS评分偏高。

【参考文献】

- [1] PRASAD N L, BALRAJ N. Comparison of ligation versus ligation with stripping of long saphenous vein in varicose veins of lower limb [J]. *Asian Pac J Health Sci*, 2016, 3(1): 117-120.
- [2] CHONG P F, KUMAR R, KUSHWAHA R, et al. Technical tip: cold saline infiltration instead of local anaesthetic in endovenous laser treatment [J]. *Phlebology*, 2006, 21(2): 88-89.
- [3] KONTOTHANASSIS D, DI MITRI R, FERRARI RUFFINO S, et al. Endovenous thermal ablation standardization of laser energy: literature review and personal experience [J]. *Int Angiol*, 2007, 26(2): 183-188.
- [4] KLEIN J A. The tumescent technique for liposuction surgery [J]. *Am J Cosmetic Surg*, 1987, 4(4): 263-267.
- [5] PANNIER F, RABE E, MAURINS U. 1470 nm diode laser for endovenous ablation (EVLA) of incompetent saphenous veins: a prospective randomized pilot study comparing warm and cold tumescence anaesthesia [J]. *Vasa*, 2010, 39(3): 249-255.
- [6] 罗丽华, 陈柱, 肖恩华, 等. 肿胀麻醉液温度对腔内激光消融治疗下肢静脉曲张术中及术后疼痛的影响 [J]. *中南大学学报(医学版)*, 2018, 43(6): 651-654.
- [7] LUO L H, CHEN Z, XIAO E H, et al. Effect of swelling anaesthesia fluid temperature on intraoperative and postoperative pain of lower extremity varicose veins by laser ablation [J]. *Journal of Central South University (Medical Edition)*, 2008, 43(6): 651-654.
- [8] 苏美娜, 张颖, 武梦华. 超声导入肿胀液对腔内激光治疗下肢静脉曲张术后疼痛的影响 [J]. *应用激光*, 2019, 39(3): 525-529.
- [9] SU M N, ZHANG Y, WU M H. Effect of ultrasonic infusion of swollen and anesthetic fluid on postoperative pain of lower extremity varicose veins treated by intra-luminal laser [J]. *Applied Laser*, 2019, 39(3): 525-529.
- [10] TARHAN I A, DUMANTEPE M, YURDAKUL I, et al. Local cooling effect on perforation rates comparing the 980-1470 nm laser wavelengths used with endovenous laser ablation: double blind in vitro experimental study [J]. *Phlebology*, 2014, 29(2): 120-125.

(编辑:黄开颜)