

· 论 著 ·

# 不同负压压强对下肢开放性骨折愈合的影响

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**摘要:**目的 探讨负压闭式引流(VSD)中不同负压压强对开放性骨折外固定术后钉道感染和骨折愈合的影响。方法 选取于2014年6月—2015年5月就诊于上海交通大学附属第六人民医院的120例下肢开放性骨折行外固定支架联合VSD治疗的患者,随机分为低负压组( $> -30$  kPa)、中负压组( $-30 \sim -60$  kPa)和高负压组( $-60 \sim -80$  kPa),每组40例,比较3组患者的术后创面愈合时间、负压引流时间、抗生素使用时间、骨折愈合时间、住院时间、负压引流管堵管发生率、创面活动性出血发生率及术后1个月钉道感染率、术后6个月临床疗效等方面的差异。结果 中负压组患者创面愈合时间、负压引流时间、抗生素使用时间、骨折愈合时间、住院时间均少于低负压组和高负压组,且有统计学意义( $P < 0.05$ );而低负压与高负压组之间各项指标均无统计学差异( $P > 0.05$ )。中负压组引流管的堵管发生率与高负压组无统计学差异( $P > 0.05$ ),但低于低负压组( $P < 0.05$ ),中负压组活动性出血发生率与低负压组无统计学差异( $P > 0.05$ ),但低于高负压组( $P < 0.05$ )。中负压组、高负压组患者术后1个月钉道感染率明显低于低负压组且有统计学意义( $P < 0.05$ ),而中负压和高负压之间无统计学差异( $P > 0.05$ )。中负压组、高负压组患者术后6个月的临床疗效明显高于低负压组且有统计学意义( $P < 0.05$ )。结论 下肢开放性骨折使用外固定支架联合VSD治疗时, $-30 \sim -60$  kPa负压组患者创面愈合时间、负压引流时间、抗生素使用时间、骨折愈合时间、住院时间均少于低负压和高负压组;且中负压组术后1月的钉道感染率最低,术后6个月的治疗效果最佳。

**关键词:**开放性骨折;外固定支架;负压闭式引流;负压

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**Effect of different negative pressures on treatment of open fractures** (Shanghai Sixth People's Hospital, Shanghai Jiao Tong University, Shanghai 200233, China)

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**Abstract: Objective** To investigate the clinical effect of different negative pressures on the treatment of open fractures in the patients with external fixation and vacuum sealing drainage (VSD). **Methods** From June 2014 to May 2015, 120 patients with open fractures of the lower extremities in Shanghai Sixth People's Hospital, Shanghai Jiao Tong University were chosen. They were randomly divided into low negative pressure ( $> -30$  kPa) group, moderate negative pressure ( $-30 \sim -60$  kPa) group, and high negative pressure ( $-60 \sim -80$  kPa) group, with 40 cases in each group. The wound healing time, negative pressure drainage time, antibiotic use time, fracture healing time, hospitalization time, incidence of plugging, incidence of active hemorrhage, pin tract infection rate at 1 month post-operation and clinical outcomes at 6 months post-operation were compared among three groups. **Results** The wound healing time, negative pressure drainage time, antibiotic use time, fracture

healing time and hospitalization time in moderate negative pressure group were less than those in low negative pressure and high negative pressure groups, with statistical significance ( $P < 0.05$ ), but there was

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