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不同波形电针对脊髓损伤大鼠运动功能恢复的影响 [点此下载全文](#)

张尧 邱有波 杨拯 李禹呈 谢少华 龚都 曹德琦 江明礼 梁楠 张晓

成都医学院临床医学系,成都,610081

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摘要:

**摘要目的:**比较不同波形电针对脊髓损伤大鼠运动功能恢复的影响,并初步探讨相应机制。**方法:**将48只健康成年大鼠均制成T9水平脊髓损伤模型,随机分为疏密波电针组(A组)、连续波电针组(B组)、断续波电针组(C组)、造模组(D组)4组,每组12只。于术后第1天、第3天、第7天对各组大鼠进行后肢功能的BBB评分、斜板试验、血清中丙二醛(MDA)含量和超氧化物歧化酶(SOD)活性测定。**结果:**大鼠脊髓损伤后第1天,A、C组BBB评分优于造模组( $P<0.05$ ),斜板试验角度A组优于造模组( $P<0.05$ )和C组( $P<0.01$ );第3天,BBB评分A、B、C组优于造模组( $P<0.05$ ),斜板试验角度A组显著优于造模组( $P<0.05$ );第7天,BBB评分A、B、C组优于造模组( $P<0.05$ ),斜板试验角度A、B、C组均优于造模组( $P<0.05$ ),其余两组间比较无显著性差异。大鼠脊髓损伤后第1天,SOD活性A、B、C组较造模组明显增高( $P<0.05$ ),MDA含量较造模组显著降低( $P<0.01$ );第3天,A、B、C组较造模组SOD活性显著升高( $P<0.05$ ),A组明显高于C组( $P<0.05$ ),A、B、C组MDA含量低于造模组( $P<0.05$ );第7天,A、B、C组SOD活性优于造模组( $P<0.05$ ),MDA含量低于造模组( $P<0.05$ ),其余两组间比较无显著性差异。**结论:**三种波形电针对于脊髓损伤大鼠运动功能的恢复均具有促进作用,其中疏密波能明显通过促进脊髓损伤大鼠神经的再生和修复,加快自由基的清除,加强血液循环,减少脊髓损伤的继发损伤等方面促进脊髓损伤大鼠运动功能的恢复。

**关键词:** [脊髓损伤](#) [电针](#) [疏密波](#) [连续波](#) [断续波](#)

The effect of electroacupuncture with different waveforms on the motor function recovery of spinal cord injury rats [Download Fulltext](#)

Clinical Medicine College, Chengdu Medical College, Chengdu, 610081

Fund Project:

Abstract:

**Abstract Objective:** To investigate the effects of electroacupuncture(EA) with different waveforms on motor function recovery in rats with spinal cord injury (SCI), and explore its' corresponding mechanism. **Method:** Forty-eight healthy adult rats were produced SCI model at T9 level and randomly divided into 4 groups: loose-dense wave EA group (group A), continuous wave EA group (group B), intermittent wave EA group (C group), model group (group D), each group with 12 rats (including male and female). At the 1st d, 3rd d, 7th d post operation BBB scores of hind limb function, tilted plane test, content of serum malondialdehyde (MDA), and activity of superoxide dismutase (SOD) were measured. **Result:** At the 1st d after SCI BBB scores in group A and group C were better than that in group D( $P<0.05$ ); the angle of tilted plane test in group A was higher than that in group D( $P<0.05$ ) and group C ( $P<0.01$ ); at the 3rd d after SCI BBB scores in groups A, B, C were better than that in group D( $P<0.05$ ), the angle of tilted plane test in group A was significantly higher than that in group D( $P<0.05$ ); at the 7th d BBB scores in groups A, B, C were better than that in group D( $P<0.05$ ), the angle of tilted plane test in groups A, B and C were higher than that in group D( $P<0.05$ ), the other two groups showed no significant difference. At the 1st d after SCI SOD activity in groups A, B, C compared with group D was significantly higher ( $P<0.05$ ), MDA content compared with group D was significantly lower ( $P<0.01$ ); at the 3rd d in groups A, B, C compared with group D SOD activity elevated significantly( $P<0.05$ ), that in group A was significantly higher than that in group C ( $P<0.05$ ), MDA contents in groups A, B, C were lower than that in group D( $P<0.05$ ); at the 7th d SOD activity in group A, B, C were better than that in group D( $P<0.05$ ), MDA content were lower than that in group D( $P<0.05$ ), the other two groups showed no significant difference. **Conclusion:** This study showed that EA with three kinds of waveforms could promote the recovery of motor function in SCI rats. EA with loose-dense wave can significantly promote nerve regeneration and repair of SCI rats, speed up the removal of free radicals, enhance blood circulation, reduce the secondary injury of SCI to promote the recovery of motor function significantly.

**Keywords:** [spinal cord injury](#) [electroacupuncture](#) [loose-dense wave](#) [continuous wave](#) [intermittent wave](#)

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