



## 椎体骨折2周与4周内行椎体后凸成形术后疗效的比较研究

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A comparison of vertebral height and bone cement leakage between surgical treatment within 2 weeks and 4 weeks by kyphoplasty for osteoporotic vertebral compression

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**摘要** 目的 比较骨质疏松性椎体压缩骨折后2周内(接受手术时病程 $\leq 14d$ )与2~4周( $14 d < \text{接受手术时病程} \leq 28d$ )行椎体后凸成形术后椎体高度及骨水泥渗漏的情况。方法 回顾性分析2010年1月至2011年1月,采用椎体后凸成形术治疗48例骨质疏松性椎体压缩骨折患者资料,根据患者受伤至手术时间分为2周内和2~4周手术组,2周内手术组22例,男4例,女18例;年龄54~85岁,平均71.17岁。2~4周手术组26例,男5例,女21例;年龄56~88岁,平均73.12岁。两组患者骨折椎体均位于T<sub>7</sub>~L<sub>4</sub>。比较两组患者年龄、性别、骨密度T值、术前椎体高度丢失率、术中注入骨水泥量、术后椎体高度恢复率、术后1年椎体高度丢失率、骨水泥渗漏率。结果 2周内和2~4周手术组术前椎体压缩程度、骨水泥注入量、骨密度T值、椎体高度恢复率分别为 $47\% \pm 21\%$ 和 $48\% \pm 19\%$ 、 $(3.69 \pm 1.03)ml$ 和 $(3.66 \pm 0.71)ml$ 、 $-2.79 \pm 0.57$ 和 $-2.87 \pm 0.95$ 、 $25\% \pm 8.3\%$ 和 $23\% \pm 7.7\%$ ,两组上述四项指标比较,差异均无统计学意义。2周内手术组1年椎体高度丢失率为 $9\% \pm 2.8\%$ ,2~4周手术组为 $11\% \pm 2.9\%$ ,两组比较差异有统计学意义。2周内和2~4周手术组骨水泥渗漏率分别为22.2% (6/27)和11.8%(4/34),两组比较差异无统计学意义。结论 骨质疏松性椎体压缩骨折后,2周内与2~4周行椎体后凸成形术均能较好地恢复椎体高度,且骨水泥渗漏率相似,但2周内手术的患者术后1年椎体高度丢失率较小。

关键词: 椎体后凸成形术 骨质疏松性骨折 骨折,压缩性

**Abstract:** Objective To compare the vertebral height and bone cement leakage of osteoporotic vertebral compression fracture treated within 2 weeks (time from injury to surgery was less than 14 days) and in 2 to 4 weeks (time from injury to surgery was between 14 and 28 days) by kyphoplasty. Methods Retrospectively analyzed the data of 48 patients with osteoporotic vertebral compression fracture treated by kyphoplasty from January 2010 to January 2011. According to the time from injury to surgery, patients were divided into two groups (surgery within 2 weeks and surgery between 2 and 4 weeks). Twenty-two patients were in surgery within 2 weeks group: 4 males and 18 females; aged from 54 to 85 years, with an average age of 71.17 years; fractured segments were distributed between T<sub>7</sub> and L<sub>4</sub>. Twenty-six patients were in surgery between 2 and 4 weeks group: 5 males and 21 females; aged from 56 to 88 years, with an average age of 73.12 years; fractured segments were distributed between T<sub>7</sub> and L<sub>4</sub>. Patients' gender, age, bone mineral density, preoperative vertebral body compression rate, intraoperative injection of bone cement volume, postoperative vertebral height restoration rate, 1-year follow-up postoperative vertebral height recollapse rate, and bone cement leakage rate were recorded and compared, respectively. Results Preoperative vertebral body compression rate, intraoperative injection of bone cement volume, T-score of BMD, and postoperative vertebral height restoration rate were  $47\% \pm 21\%$  and  $48\% \pm 19\%$ ,  $(3.69 \pm 1.03) ml$  and  $(3.66 \pm 0.71) ml$ ,  $-2.79 \pm 0.57$  and  $-2.87 \pm 0.95$ ,  $25\% \pm 8.3\%$  and  $23\% \pm 7.7\%$  in the surgery within 2 weeks group and surgery between 2 and 4 weeks group respectively. There was no significant difference in 4 indicators mentioned above between two groups. The 1-year follow-up postoperative vertebral height recollapse rates were  $9\% \pm 2.8\%$  (surgery within 2 weeks) and  $11\% \pm 2.9\%$  (surgery between 2 and 4 weeks), respectively. There was significant difference between two groups. Bone cement leakage rates were 22.2%(6/27) in surgery within 2 weeks group and 11.8% (4/34) in surgery between 2 and 4 weeks group. There was no significant difference between two

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groups. Conclusion Surgery within 2 weeks and 4 weeks can significantly achieve vertebral height restoration, and bone cement leakage rates were similar between two groups, while 1?year follow?up postoperative vertebral height recollapse rate was higher than that in the surgery between 2 and 4 weeks group

Key words: **Kyphoplasty** **Osteoporotic fractures** **Fractures, compression**

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