Qualitative Assessment of Postoperative Pain and Sensitization Following Primary and Repeated Lumbar Spondylodesis.

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Qualitative Assessment Of Postoperative Pain And Sensitization Following Primary And Repeated Lumbar Spondylodesis

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INTRODUCTION

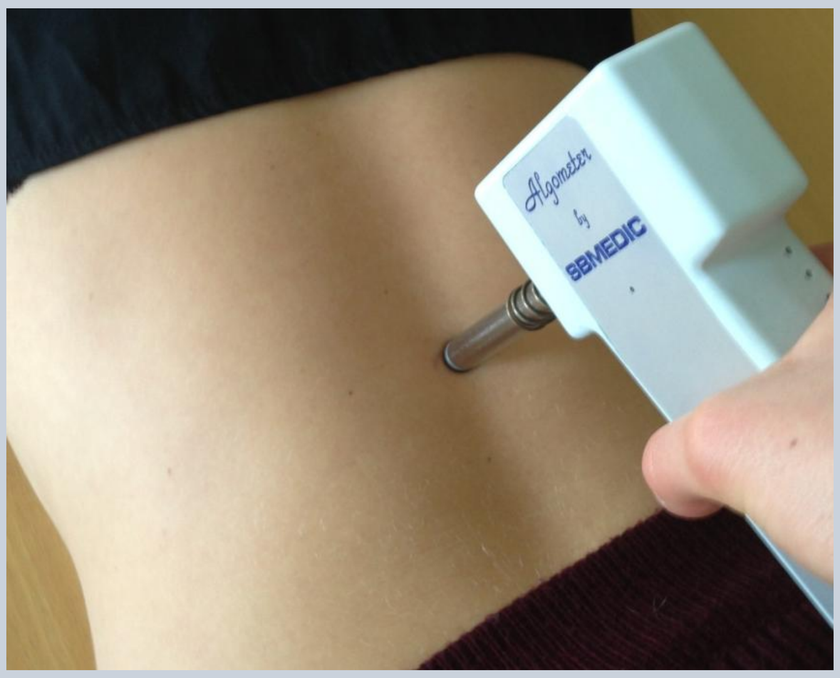
- **Lumbar spondylodesis for degenerative disease is not curative and have adequate pain relief in 70-80 % of patients.**
- **It was hypothesized that patients with previous surgery experience more severe pain, more central sensitization, and lower quality of life than primary patients.**

OBJECTIVES

This study aimed to investigate the qualitative assessment of postoperative pain and sensitization following primary and repeated spondylodesis.

METHODS

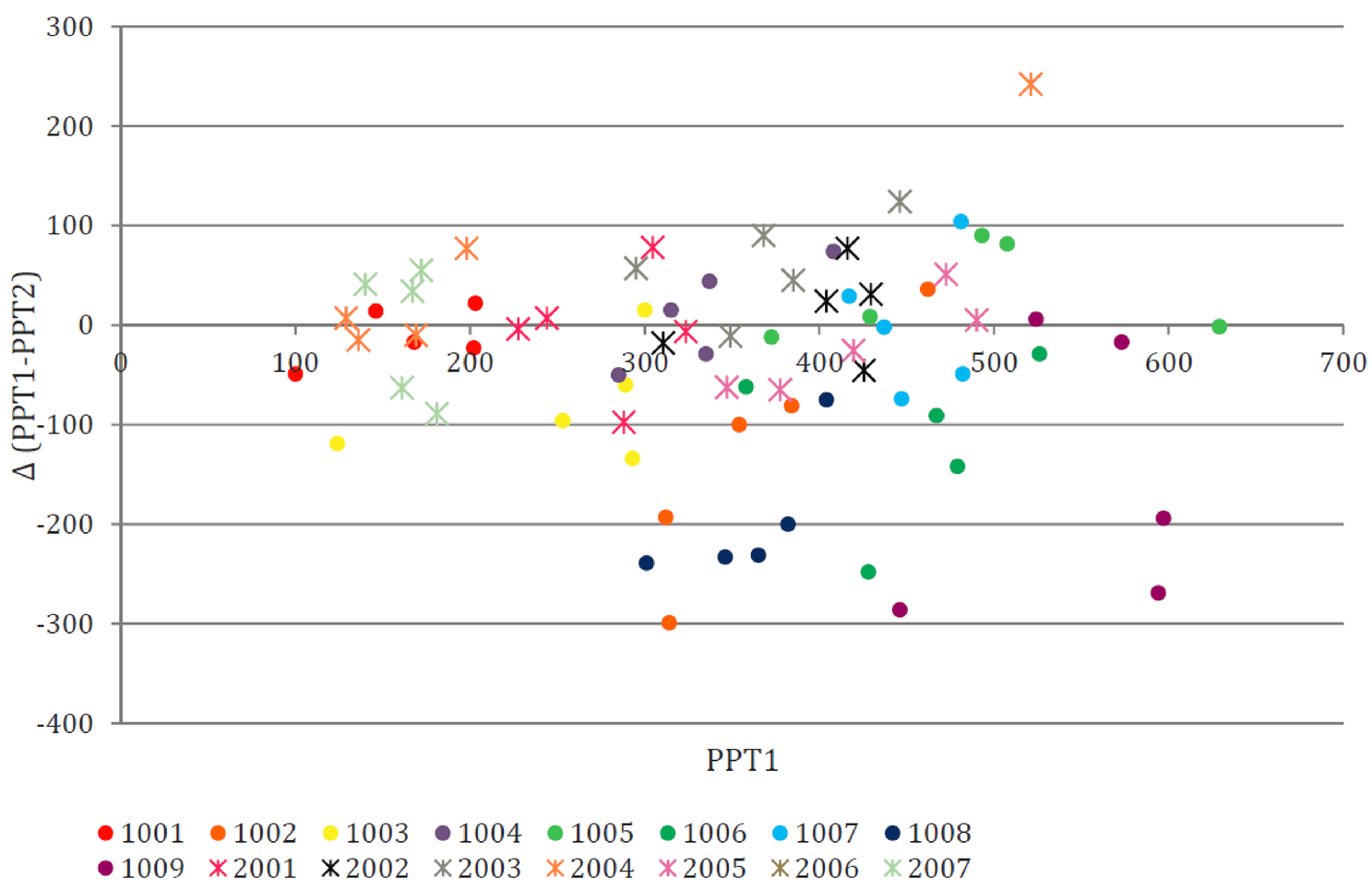
- **A total of 16 patients 1 year after surgery were investigated using quantitative measurements of pain pressure threshold (PPT) with and without conditioned pain modulation (CPM), and subjective evaluations through EuroQol-5D, Oswestry Disability Index, Pittsburgh, and Paindetect questionnaire.**
- **Pressure pain threshold measurements (kg/cm) using a pressure algometer at the vertebrae**
- **The expanded pain analysis consisted of a qualitative assessment of pain and sensitization.**
- **Quantitative measurements of PPT were measured with a pressure algometer. T**
- **he sclerotomal measurements were done at spinous processes L2, L3, L4, L5, and S1 while the myotomal measurements were done at the adductor longus muscle, vastus medialis muscle, vastus lateralis muscle, tibialis anterior muscle, and Achilles tendon.**
- **The patient was instructed to push the pressure release button at the time the pressure turned to pain sensation.**
- **Rehearsing was done at the patient's lateral epicondyle to make sure they knew when to press the release button.**
- **The patient was positioned first lying on the front side and then sitting.**



RESULTS

- **A significant difference in PPT measurements between primary and previous surgery was only seen in the left Achilles tendon (p = 0.04).**
- **In primary patients the PPT measurements were significantly higher with DNIC than without at L5 (p = 0.04), the left vastus lateralis muscle (p = 0.02) and the right Achilles tendon (p = 0.04).**
- **In patients with previous surgery there was no significant difference in PPT with and without CPM. Visualizing difference (PPT1-PPT2) to PPT1 the group of data points from primary surgery was located lower than previous surgery, suggesting lower pain thresholds and more severe pain after repeated lumbar spondylodesis.**

Each color shows the measurements for one specific patient. Patient ID 1001 to 1009 indicates primary surgery and 2001 to 2007 indicates previous surgery



CONCLUSIONS

The study did not provide any significant difference between PPT in patients with primary and previous surgery. The overall assessment of the results provided a tendency that patients with previous surgery experience more severe pain.

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