**Original article:**

**The Role of Gabapentin in the Prevention of Postoperative Neuritis following Radiofrequency Ablation of Cervical and Lumbar Medial Branch Nerves**

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**Abstract:**

**Background:** Symptomatic neuritis is a very common problem in the interventional pain clinic, reported anecdotally by up to 30% of patients undergoing radiofrequency ablation of medial branch nerves in the cervical and lumbar spine. The importance of negating the effects of this debilitating complication cannot be understated. We therefore undertook this study to determine whether gabapentin has a role in reducing the incidence of neuritis after these procedures.

**Objective:** To determine whether gabapentin has a role in reducing the incidence of postoperative neuritis following radiofrequency ablation of medial branch nerves in the cervical and lumbar spine.

**Methodology:** We identified a total of 215 patients who underwent radiofrequency ablation (RFA) in the cervical and lumbar spine for pain management within the last two years. 145 patients underwent lumbar RFA, and 70 patients underwent cervical RFA. Using a retrospective chart review, we then determined 1) whether any of these patients had been taking gabapentin at a minimum dose of 300 mg by mouth daily within 2 weeks prior to the procedure and 2) whether any of these patients experienced symptomatic neuritis in the first month following their RFA.

**Results:** 25 out of 215 (12%) patients experienced symptomatic neuritis within 1 month of their RFA. Of these, 21 (84%) were not taking gabapentin and 4 (16%) were taking gabapentin. 190 out of 215 (88%) patients did not experience symptomatic neuritis following their RFA. Stated differently, only 4 out of 56 (7.1%) patients in the gabapentin treated group experienced neuritis, whereas 21 out of 159 (13.2%) of patients in the non-gabapentin treated group experienced neuritis. This implies a protective effect of gabapentin, with an odds ratio of experiencing symptomatic neuritis of 0.51 (95%CI= 0.17-1.54) in the gabapentin-treated group (2-tailed p value = 0.24).

**Limitations:** This was not a prospective study, rather a retrospective chart review. The study is also limited by a small sample size and a lack of uniformity between the doses and duration of treatment in the gabapentin-treated group.

**Conclusion:** Most notably, there was a significant decrease in the incidence of symptomatic neuritis following RFA of medial branch nerves in the cervical and lumbar spine in the gabapentin-treated group. This suggests that there may be a role for gabapentin in the prevention of symptomatic neuritis following RFA. It might be useful for clinicians to add gabapentin to the patient’s medication regimen at least 2 weeks prior to a planned RFA procedure.

**Key words:** Radio-frequency , neuritis, pain management, gabapentin