

## In Response to Risks and Pitfalls of Epidural Injections during Management of Lumbar Disc Herniation: Few Comments

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### LETTERS TO EDITORS

We appreciate comments on our manuscript of the Comparison of Efficacy Caudal, Interlaminar, and Transforaminal Epidural Injections in Managing Lumbar Disc Herniation: Is One Method Superior to the Other? [1]. There has been extensive information in reference to the spinal cord infarction due to embolization of particulate steroids, but, also due to needle induced vasospasm, mechanical disruption of radiculomedullary arteries and compression from an epidural abscess or hematoma as probable mechanisms of spinal cord injury in patients undergoing various types of epidural injections [2-10]. However, no such complications were reported in our manuscript [1]. In fact, we have previously demonstrated a lack of complications in our series [11]. The authors might consider reviewing the manuscript by Atluri et al in reference to lumbar transforaminal epidural injections [9]. All the complications reported with lumbar transforaminal epidural injections have been related to the safe or superior triangle. An infraneural approach appears to be the safest approach. In this trial of transforaminal injections, we have utilized an infraneural approach and occasionally a supraneural approach. Further, the majority of the injections were per-

formed at L5 and S1 with a blunt needle [12]. No post lumbar surgery patients were included. These straightforward precautions assist in avoiding the complications. In addition, we also used a nonparticulate steroid initially until it became unavailable. At present, there is no significant evidence to show the efficacy of nonparticulate steroids available in the present format, so we are unable to recommend nonparticulate steroids; however, there was no significant difference between local anesthetic and steroids [12-20]. In fact, the local anesthetic group fared better than the steroid group [12]. Consequently, we would recommend an infraneural approach and initially utilizing local anesthetic and particulate steroid with appropriate selection criteria for optimal results and to avoid any such complications.

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