The article of Shapkin and associates raises some long-standing questions concerning the treatment of severe spasticity from cerebral palsy (CP). They investigated the use of percutaneous radiofrequency (RF) rhizolysis at L2–S1 bilaterally in 26 patients with non-ambulatory status (Gross Motor Function Classification System levels IV–V). These authors found that average spasticity (on the modified Ashworth scale) significantly improved after these procedures, but locomotion was not better. Although there were no direct comparisons in this retrospective review, the surgical treatment of these patients by RF rhizolysis could be considered to be palliative and worthwhile, replacing other more sustained and costly surgical treatments such as chronic administration of intrathecal baclofen.

The other comparator in the surgical treatment of severe spasticity from CP is the use of selective dorsal rhizotomy (SDR) pioneered by Fasano, Peacock, Park, and later, many others. As the authors of the present work noted, SDR is an invasive procedure, with attendant surgical morbidity and recovery time. SDR also presents obstacles involving the availability of the operative venue and sophisticated neurophysiological monitoring required for the successful conduct of the procedure. If, in fact, percutaneous RF rhizolysis could provide equivalent outcomes in this select group, it would have the potential advantages of increased access to treatment and an outpatient procedure with minimal morbidity and postoperative healing.

Each of us practices in our own unique environment, and the analyses of our outcomes from any procedure are limited by inherent ascertainment bias. Only a randomized, prospective, comparative trial with clear and objective functional endpoints can answer the question of whether RF rhizolysis might be equivalent to SDR for this select population of patients with severe spasticity from CP. Furthermore, future investigators in this area should consider using a Kaplan-Meier approach to the analysis of outcome data, i.e., a survival curve based on a predetermined definition of success over time for either treatment. Clearly, a range of “long-term” follow-up from 2 months to 5 years (as in this study) does not adequately inform the neurosurgical community regarding the sustainable successful outcome from either procedure over time. Hopefully, this work and other similar comparisons will stimulate a multicenter prospective and randomized comparison of SDR and RF rhizotomy in these select patients.

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References

Disclosures
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