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Surgery Versus Nonsurgical Treatment of Lumbar Spinal Stenosis

Anthony Delitto, PT, PhD, Sara R. Piva, PT, PhD, Charity G. Patterson, PhD, MSPH, and William Welch, MD

University of Pittsburgh; Pittsburgh, Pennsylvania

IN RESPONSE:

We agree with Dr. Barrer that conservative care should precede considering surgery. However, we disagree that not having prior PT is a “breach of care.” Exactly what constitutes conservative care is not universally agreed upon. Physical therapy is 1 form, as is watchful waiting, epidural steroids, drug regimens, and many combinations. In our study, surgeons deemed patients surgical candidates largely because conservative care — including, in some cases, previous PT — had been unsuccessful.

As for the high crossover rate, complier average causal effect and inverse probability weighting analyses were done to address that issue. In terms of success rates of surgery, it would be helpful if Dr. Barrer had included references, because definitions of success can vary. We defined it as improvement by an SD of 0.5 regardless of crossover status, because we believed that the risks of surgery warranted setting a high bar.

As for the implication that the surgical group did not fare well overall, the plot of the group means suggests otherwise and parallels well the outcomes of the surgical groups in SPORT (Spine Patient Outcomes Research Trial) and Malmivaara and colleagues’ trials. The text and Appendix Table 4 of our article list 33 complications (22 in the surgery group and 11 in the PT group) that the table clearly details. Other studies that actually surveyed complications had similar rates (for example, the reoperation rate was 8% in SPORT and 6% in Malmivaara and colleagues’ trial) (1, 2).

In response to Dr. Robertson and associates, we agree that generalizability of study results was limited to those patients who agreed to a 50% chance to be randomly assigned to PT. Most patients who refused to be randomly assigned cited the strong desire to have surgery as the reason, and it cannot be assumed that these results would generalize to that group. Understand the balancing act of internal versus external validity, with the sacrifice of generalizability in order to strengthen internal validity by reducing crossover in at least 1 of the study groups.

We disagree that the number of PT sessions is related to treatment failure. The most often-cited reason for discontinuing PT was the burden of copayments. As for the 2 crossovers

from surgery to PT, we agree that it is impossible to perfectly compare surgical versus nonsurgical care. However, with such a minuscule crossover rate in the surgical group, we believe that we achieved the goal of reducing crossover in 1 group, allowing for meaningful intention-to-treat analyses. We agree that crossovers in the PT group presented a challenge in analyses, something that we tried to address using complier average causal effect and inverse probability weighting.

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