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## Comment

Transpedicle screw and rod instrumentation has become the preferred technique for performing stabilization and fusion in the treatment of degenerative lumbar spine disease. The authors now have added a relevant and well-done study to this field of spinal surgical management. In their series, 41 patients suffering from lumbar degenerative disease were treated using either a polyetheretherketone (PEEK) or titanium alloy rod system for single level posterior fusion. Meanwhile, it was demonstrated that PEEK rods have a similar high fusion and low reoperation rate when compared to previous instrumentation modalities (1,3). Furthermore, PEEK rods confer similar clinical efficacy as titanium alloy constructs and their semirigid properties, combined with their radiolucency, suggest that PEEK rods have even some advantages over titanium alloy rods for application in posterior lumbosacral instrumentation. However, the biomechanical effects of implantation of stabilization systems limit the range of motion and produce an unforeseeable nonphysiological stress on the operated functional spinal unit when compared to the nonoperated and intact spine. Additionally, the centre of rotation and stress distribution might differ according to the design and material of the implants used (2). Therefore, the indication for the necessity of spinal instrumentation and fusion should be assessed with scrutiny and the potential biomechanical effects of current materials and systems applied should be carefully considered before final clinical implementation.

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