Reviewer's report

**Title:** Treatment of adolescent idiopathic scoliosis with segmental pedicle screws and combined local autograft and allograft bone for spinal fusion

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**Reviewer:** Frank L Acosta

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Li et al. performed a retrospective cohort study of 50 consecutive patients with AIS treated with posterior pedicle screw-rod instrumentation and fusion with a combination of allograft and local autograft bone. The purpose of their study was to compare the efficacy of this combination of allograft and autograft. Their primary outcome measures were pseudoarthrosis and Cobb angle correction. No clinical outcome data were collected. They reported no pseudoarthrosis cases at a minimum follow-up of 18 months and noted an average loss of correction of 1.1 degrees, with an average Cobb angle correction of 77.8%. No instrumentation failures occurred.

While this study is concise and fairly well written, the question posed by the authors is not well-defined. What do they mean by “effectiveness?” It seems that they will only be able to draw conclusions on radiographic outcomes. A better definition of their question is necessary.

The methods are appropriate. Was any standardized clinical outcome data collected?

The data are sound. Can the authors provide data on how much allograft was used per case. How did they decide how much to use?

Manuscript adheres to the relevant standards for reporting and data deposition.

With regard to discussion and conclusions, I think the authors should include a section comparing their results to previous reports using iliac crest autograft. Also a section on what new data their study provides, as the ability to achieve fusion with allograft in AIS surgery has been reported by several prior studies.

Limitations are clearly stated. An additional limitation the authors should mention is the fact that this is a retrospective series with a relatively small n.

Title should be “Radiographic outcomes after treatment of adolescent idiopathic scoliosis with segmental pedicle screws and combined local autograft and allograft bone for spinal fusion.”

Writing is ok.

**Level of interest:** An article of limited interest
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.