

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Orthopedics

**Manuscript NO:** 40534

**Title:** Intra-operative CT guided navigation for pediatric pelvic instrumentation: A technique guide

**Reviewer's code:** 03072151

**Reviewer's country:** Taiwan

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-07-09

**Date reviewed:** 2018-07-09

**Review time:** 9 Hours

| SCIENTIFIC QUALITY                                | LANGUAGE QUALITY   | CONCLUSION   | PEER-REVIEWER STATEMENTS                      |
|---|--|--|---|
| <input type="checkbox"/> Grade A: Excellent       | <input checked="" type="checkbox"/> Grade A: Priority publishing | <input type="checkbox"/> Accept                    | Peer-Review:                                  |
| <input type="checkbox"/> Grade B: Very good       | <input type="checkbox"/> Grade B: Minor language                 | (High priority)                                    | <input checked="" type="checkbox"/> Anonymous |
| <input checked="" type="checkbox"/> Grade C: Good | polishing  | <input type="checkbox"/> Accept                    | <input type="checkbox"/> Onymous              |
| <input type="checkbox"/> Grade D: Fair            | <input type="checkbox"/> Grade C: A great deal of                | (General priority)                                 | Peer-reviewer's expertise on the              |
| <input type="checkbox"/> Grade E: Do not          | language polishing   | <input checked="" type="checkbox"/> Minor revision | topic of the manuscript:                      |
| publish   | <input type="checkbox"/> Grade D: Rejection                      | <input type="checkbox"/> Major revision            | <input checked="" type="checkbox"/> Advanced  |
|   |  | <input type="checkbox"/> Rejection                 | <input type="checkbox"/> General              |
|   |  |  | <input type="checkbox"/> No expertise         |
|   |  |  | Conflicts-of-Interest:                        |
|   |  |  | <input type="checkbox"/> Yes                  |
|   |  |  | <input checked="" type="checkbox"/> No        |

### SPECIFIC COMMENTS TO AUTHORS

Dear editor and authors, This is a Minireview entitled "Intra-operative CT Guided Navigation for Pediatric Pelvic Instrumentation: A Technique Guide" written by Jason B Anari et al., describing the application of CT image navigation for safe placement of



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S2AI screws with decreased radiation doses and improved techniques in pediatric neuromuscular scoliosis patients with pelvic obliquity. My suggestions are: •

Navigation probe are utilized in reference to an anatomical anchor point for the registration process. Reference point translation may lead to errors, which maybe serious. Are there methods to prevent this and do you have any salvage if this really happens to prevent catastrophic results? • In your paper, similar already well-known results were obtained in comparison with other large-scale studies, meta-analysis, or review, mainly the safety of navigation assisted instrumentation to reduce screw breach. For instance, Neurosurgery 80:S86–S99, 2017. Please specify the novelty of your study.

#### **INITIAL REVIEW OF THE MANUSCRIPT**

##### ***Google Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [Y] No

##### ***BPG Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [Y] No

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Orthopedics

**Manuscript NO:** 40534

**Title:** Intra-operative CT guided navigation for pediatric pelvic instrumentation: A technique guide

**Reviewer's code:** 03708308

**Reviewer's country:** Italy

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-07-02

**Date reviewed:** 2018-07-11

**Review time:** 9 Days

| SCIENTIFIC QUALITY                                | LANGUAGE QUALITY  | CONCLUSION   | PEER-REVIEWER STATEMENTS                      |
|---|---|--|---|
| <input type="checkbox"/> Grade A: Excellent       | <input type="checkbox"/> Grade A: Priority publishing       | <input type="checkbox"/> Accept                    | Peer-Review:                                  |
| <input type="checkbox"/> Grade B: Very good       | <input checked="" type="checkbox"/> Grade B: Minor language | (High priority)                                    | <input checked="" type="checkbox"/> Anonymous |
| <input checked="" type="checkbox"/> Grade C: Good | polishing   | <input type="checkbox"/> Accept                    | <input type="checkbox"/> Onymous              |
| <input type="checkbox"/> Grade D: Fair            | <input type="checkbox"/> Grade C: A great deal of           | (General priority)                                 | Peer-reviewer's expertise on the              |
| <input type="checkbox"/> Grade E: Do not          | language polishing  | <input type="checkbox"/> Minor revision            | topic of the manuscript:                      |
| publish   | <input type="checkbox"/> Grade D: Rejection                 | <input checked="" type="checkbox"/> Major revision | <input type="checkbox"/> Advanced             |
|   |   | <input type="checkbox"/> Rejection                 | <input checked="" type="checkbox"/> General   |
|   |   |  | <input type="checkbox"/> No expertise         |
|   |   |  | Conflicts-of-Interest:                        |
|   |   |  | <input type="checkbox"/> Yes                  |
|   |   |  | <input checked="" type="checkbox"/> No        |

### SPECIFIC COMMENTS TO AUTHORS

The paper is an interesting description of S2-alar-iliac technique (S2AI) using intra-operative CT Guided Navigation surgical technique. The technique was introduced in adults in 2007 by Sponseller, but is commonly used in children, and was first



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described being placed via freehand technique with intra-operative fluoroscopy. The authors reported a successful 10 years neuromuscular scoliosis surgical experience using intra-operative CT Guided Navigation and highlighted how the freehand technique suffers from the anatomic anomalies present in the pelvis in neuromuscular scoliosis. The authors concluded the intra-operative CT dose is extremely low and all the faculty are prepared to place without image guidance if the technology fails intra-operatively. Comment 1: Methods section should be added in order to report the complete procedure. The authors described only a surgical technique without mentioning pre-operative preparation, patient position, surgical approach and aftercare. Furthermore, no surgical indication and contraindication were reported. Please add. Comment 2: In Discussion section, the authors reported a satisfied 10 years a CT guided approach, could be interesting for the readers to know the report your personal experience including number of surgeries, how many per year, complication and misplacement rate, comparison with the freehand technique literature/authors data. Comment 3: the comparison of cost, radiation safety for patient/surgeon/staff, reliance on technology and associated risks with the learning curve between the freehand and CT guided technique should be amplified, as the number of references, and the literature data reported in discussion section. Comment 4: the authors concluded that in their institution the intra-operative CT dose is extremely low and all faculty are prepared to place without image guidance if the technology fails intra-operatively. Should be interesting to know why and how many time have the technology failed, and compare the intraoperative time between CT Guided cases, CT Guided fail cases, and freehand cases.

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