STROBE Statement—Checklist of items that should be included in reports of ***cohort studies***

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|  | Item No | Recommendation |  |
|  **Title and abstract** | 1 | (*a*) Indicate the study’s design with a commonly used term in the title or the abstract | This has been done. |
| (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found | This has been done. |
| Introduction |  |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported | Done. |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | Done. |
| Methods |  |
| Study design | 4 | Present key elements of study design early in the paper | Retrospective cohort study with intracohort intergroup comparison; level of evidence: 4 (Case series and poor quality cohort and case-control studies, UK Oxford, v.2009)  |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection | Done. |
| Participants | 6 | (*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up | Patients with congenital spinal deformity with a leading hemivertebra, not previously operated on up to the age of 18 excluding patients over 18 years old or previously performed surgery to correct spinal deformity or multiple congenital spinal deformities for more than 6 segments. |
| (*b*)For matched studies, give matching criteria and number of exposed and unexposed |  |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | This has been carried out. |
| Data sources/ measurement | 8\* | For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group | They were divided into 4 group based on the age, severity of deformity, type and length of instrumentation. Cobb’s angle was used as measurement tool for the scoliosis and kyphosis that ensued as a result of the deformity and for measurement after surgical correction and for follow up. Data was gotten from hospital records of the patients. |
| Bias | 9 | Describe any efforts to address potential sources of bias |  |
| Study size | 10 | Explain how the study size was arrived at | It was a retrospective study of spinal deformity as a result of hemivertebra done between 2010 to 2018 at Russian Ilizarov Centre, Kurgan. |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why | Was analyse using SPSS version 22 |
| Statistical methods | 12 | (*a*) Describe all statistical methods, including those used to control for confounding | Student t test was used to compare. |
| (*b*) Describe any methods used to examine subgroups and interactions | As above. |
| (*c*) Explain how missing data were addressed |  |
| (*d*) If applicable, explain how loss to follow-up was addressed |  |
| (*e*) Describe any sensitivity analyses |  |
| Results |  |
| Participants | 13\* | (a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed | 117 patients were included and divided into 4 groups: Group 1 had 15 patients; Group 2 had 24 patients; Group 3 had 29 patients and group 4 had 49 patients. |
| (b) Give reasons for non-participation at each stage |  |
| (c) Consider use of a flow diagram |  |
| Descriptive data | 14\* | (a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders | Children with spinal deformity as a result of hemivertebra aged 1 to 8 years with male female ratio of 51:66. The Cobbs angle for the patients ranged from 14.80 to 79.00 pre-operatively; 0.10 to 34.80 post-operatively and kyphosis ranged from 15.10 to 161.10 pre-operatively; -12.80 to 43.80 post-operatively. |
| (b) Indicate number of participants with missing data for each variable of interest |  |
| (c) Summarise follow-up time (eg, average and total amount) | 1 to 8 years with average of 3 years |
| Outcome data | 15\* | Report numbers of outcome events or summary measures over time | 5 patients developed complications in group I but no neurological complications; 7 patients in group II with no neurological complication; 5 patients in group II with 2 having neurological complications and 8 patients in group IV with 5 developing neurological complications. |
| Main results | 16 | (*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included |  |
| (*b*) Report category boundaries when continuous variables were categorized |  |
| (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period |  |
| Other analyses | 17 | Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses | This is as recorded in table 2. |
| Discussion |  |
| Key results | 18 | Summarise key results with reference to study objectives | Scoliosis was corrected to 74.9% in group I; 83.7% in group II; 83.1% in group III and 72.5% in group IV with loss of correction of 12.1% at long term follow up in group 4.Kyphosis was corrected to 84.0% in group I; 100% in group II; 86.7% in group III and 81.6% in group IV. |
| Limitations | 19 | Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias | It is a retrospective study. |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | As patients grow older, the deformity increase in severity and this leads to increase in length of instrumentation, the time of surgery and blood loss and also the potentials for complications. |
| Generalisability | 21 | Discuss the generalisability (external validity) of the study results |  |
| Other information |  |
| Funding | 22 | Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based |  |

\*Give information separately for exposed and unexposed groups.

**Note:** An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.