**Supplementary Table 1**

PRISMA 2009Checklist

|  |  |  |  |
| --- | --- | --- | --- |
| **Section/topic**  | **#** | **Checklist item**  | **Reported on page #**  |
| **TITLE**  |  |
| Title  | 1 | Identify the report as a systematic review, meta-analysis, or both.  | 1 |
| **ABSTRACT**  |  |
| Structured summary  | 2 | Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.  | 1 |
| **INTRODUCTION**  |  |
| Rationale  | 3 | Describe the rationale for the review in the context of what is already known.  | 2 |
| Objectives  | 4 | Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).  | 2 |
| **METHODS**  |  |
| Protocol and registration  | 5 | Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.  | 2 |
| Eligibility criteria  | 6 | Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.  | 3,4 |
| Information sources  | 7 | Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.  | 3 |
| Search  | 8 | Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.  | 3 |
| Study selection  | 9 | State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).  | 4 |
| Data collection process  | 10 | Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.  | 4 |
| Data items  | 11 | List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.  | 4 |
| Risk of bias in individual studies  | 12 | Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.  | 4 |
| Summary measures  | 13 | State the principal summary measures (e.g., risk ratio, difference in means).  | 4-5 |
| Synthesis of results  | 14 | Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I2) for each meta-analysis.  | 4-5 |
| Risk of bias across studies  | 15 | Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).  | NA |
| Additional analyses  | 16 | Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.  | NA |
| **RESULTS**  |  |
| Study selection  | 17 | Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.  | 6 |
| Study characteristics  | 18 | For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.  | 6 |
| Risk of bias within studies  | 19 | Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).  | 6 |
| Results of individual studies  | 20 | For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.  | 7-9 |
| Synthesis of results  | 21 | Present results of each meta-analysis done, including confidence intervals and measures of consistency.  | 7-9 |
| Risk of bias across studies  | 22 | Present results of any assessment of risk of bias across studies (see Item 15).  | NA |
| Additional analysis  | 23 | Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).  | NA |
| **DISCUSSION**  |  |
| Summary of evidence  | 24 | Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).  | 10 |
| Limitations  | 25 | Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).  | 11 |
| Conclusions  | 26 | Provide a general interpretation of the results in the context of other evidence, and implications for future research.  | 11 |
| **FUNDING**  |  |
| Funding  | 27 | Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.  | 12 |

Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, et al**.** Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4:1.

**Supplementary Table 2**

**Pubmed *(Inception-2018.07.12)***

Tocilizumab OR actemra or Atlizumab OR MRA OR RoActemra OR interleukin-6\* OR “myeloma receptor antibody”

AND

 ((((((((((((((((((((((((("Takayasu Arteritis") OR "Arteritis") OR "TA") OR "Arteritis, Takayasu") OR "Young Female Arteritis") OR "Arteritides, Young Female") OR "Arteritis, Young Female") OR "Female Arteritides, Young") OR "Female Arteritis, Young") OR "Young Female Arteritides") OR "Takayasu Syndrome") OR "Takayasu's Arteritis") OR "Takayasus Arteritis") OR "Arteritis, Takayasu's") OR "Arteritis, Takayasus") OR "Takayasu Disease") OR "Disease, Takayasu") OR "Aortitis Syndrome") OR "Syndrome, Aortitis") OR "Arteritides") OR "Arterial Inflammation") OR "Inflammation, Arterial") OR "Aortitis") OR "Pulseless Disease") OR “aorta arch syndrome”)

***Search result (Total: 975)***

**Cochrane *(Inception-2018.07.12)***

Tocilizumab or actemra or Atlizumab or MRA or RoActemra or interleukin or myeloma receptor antibody

AND

Takayasu Arteritis or Arteritis or TA or Arteritis Takayasu or Young Female Arteritis or Arteritides Young Female or Arteritis Young Female or Female Arteritides Young or Female Arteritis Young or Young Female Arteritides or Takayasu Syndrome or Takayasus Arteritis or Takayasus Arteritis or Arteritis Takayasus or Arteritis Takayasus or Takayasu Disease or Disease Takayasu or Aortitis Syndrome or Syndrome Aortitis or Arteritides or Arterial Inflammation or Inflammation Arterial or Aortitis or Pulseless Disease or aorta arch syndrome

***Search result (Total: 404)***

**Embase *(Inception-2018.07.12)***

Tocilizumab or actemra or Atlizumab or MRA or RoActemra or interleukin-6\* or “myeloma receptor antibody” or

AND

('takayasu arteritis'/exp OR 'takayasu arteritis' OR 'ta'/exp OR 'ta' OR 'arteritis'/exp OR 'arteritis' OR 'arteritis, takayasu' OR 'pulseless disease'/exp OR 'pulseless disease' OR 'young female arteritis' OR 'arteritides, young female' OR 'arteritis, young female' OR 'female arteritides, young' OR 'female arteritis, young' OR 'young female arteritides' OR 'takayasu syndrome'/exp OR 'takayasu syndrome' OR 'takayasus arteritis' OR 'arteritis, takayasus' OR 'takayasu disease'/exp OR 'takayasu disease' OR 'disease, takayasu' OR 'aortitis syndrome'/exp OR 'aortitis syndrome' OR 'syndrome, aortitis' OR 'arteritides' OR 'arterial inflammation' OR 'inflammation, arterial' OR 'aortitis'/exp OR 'aortitis' OR 'aorta arch syndrome'/exp OR 'aorta arch syndrome')

***Search result (Total: 1420)***

**Clinicaitrial.gov *(Inception-2018.07.12)***

“tocilizumab” AND “takayasu arteritis”

***Search result (Total: 01)***

**UMIN Clinical Trials Registry (UMIN-CTR) *(Inception-2018.07.12)***

“tocilizumab” AND “takayasu arteritis”

***Search result (Total: 00)***

**Supplementary Table 3**

CONSORT checklist

|  |  |  |  |
| --- | --- | --- | --- |
| Section/Topic | Item No | Checklist item | Reported on page No |
| Title and abstract |
|  | 1a | Identification as a randomised trial in the title | 348 |
| 1b | Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts) | 348 |
| Introduction |
| Background and objectives | 2a | Scientific background and explanation of rationale | 348- |
| 2b | Specific objectives or hypotheses | 348-349 |
| Methods |
| Trial design | 3a | Description of trial design (such as parallel, factorial) including allocation ratio | 349 |
| 3b | Important changes to methods after trial commencement (such as eligibility criteria), with reasons | NA |
| Participants | 4a | Eligibility criteria for participants | 349 |
| 4b | Settings and locations where the data were collected | Not reported |
| Interventions | 5 | The interventions for each group with sufficient details to allow replication, including how and when they were actually administered | 349 |
| Outcomes | 6a | Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed | 349 |
| 6b | Any changes to trial outcomes after the trial commenced, with reasons | NA |
| Sample size | 7a | How sample size was determined | Supplement Appendix |
| 7b | When applicable, explanation of any interim analyses and stopping guidelines | NA |
| Randomisation: |  |  |  |
|  Sequence generation | 8a | Method used to generate the random allocation sequence | 349 |
| 8b | Type of randomisation; details of any restriction (such as blocking and block size) | 349 |
|  Allocation concealment mechanism | 9 | Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned | 349 |
|  Implementation | 10 | Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions | Not reported |
| Blinding | 11a | If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how | 349 |
| 11b | If relevant, description of the similarity of interventions | NA |
| Statistical methods | 12a | Statistical methods used to compare groups for primary and secondary outcomes | 350-351 |
| 12b | Methods for additional analyses, such as subgroup analyses and adjusted analyses | 350-351 |
| Results |
| Participant flow (a diagram is strongly recommended) | 13a | For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome | 351, No diagram |
| 13b | For each group, losses and exclusions after randomisation, together with reasons | 351 |
| Recruitment | 14a | Dates defining the periods of recruitment and follow-up | 349 |
| 14b | Why the trial ended or was stopped | 351 |
| Baseline data | 15 | A table showing baseline demographic and clinical characteristics for each group | 349 |
| Numbers analysed | 16 | For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups | 350 |
| Outcomes and estimation | 17a | For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval) | 350 |
| 17b | For binary outcomes, presentation of both absolute and relative effect sizes is recommended | 350-351 |
| Ancillary analyses | 18 | Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory | 350-351 |
| Harms | 19 | All important harms or unintended effects in each group (for specific guidance see CONSORT for harms) | 352 |
| Discussion |
| Limitations | 20 | Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses | 352 |
| Generalisability | 21 | Generalisability (external validity, applicability) of the trial findings | 353 |
| Interpretation | 22 | Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence | 352-353 |
| Other information |  |
| Registration | 23 | Registration number and name of trial registry | 349 |
| Protocol | 24 | Where the full trial protocol can be accessed, if available | 349 |
| Funding | 25 | Sources of funding and other support (such as supply of drugs), role of funders | 353 |

NA: Not Applicable