MOOSE Checklist for Meta-analyses of Observational Studies

The association between serum bilirubin and kernicterus spectrum disorder: A systematic review and meta-analysis

Item No	Recommendation	Reported on Page No
Reporting of background should include		
1	Problem definition	4, Introduction paragraph 1
2	Hypothesis statement	N/A (objectives, 5, Introduction, paragraph 3)
3	Description of study outcome(s)	6, Methods, paragraph 4
4	Type of exposure or intervention used	6, Methods, paragraph 3 (predictive factor)
5	Type of study designs used	5, Methods paragraph 1
6	Study population	5, Methods, paragraph 1
Reporting of search strategy should include		
7	Qualifications of searchers (eg, librarians and investigators)	6, Methods, paragraph 5, Search strategies (“we” searched, indicating the investigators)
8	Search strategy, including time period included in the synthesis and key words	6, Methods, paragraph 5, Search strategies
9	Effort to include all available studies, including contact with authors	6, Methods, paragraph 5, Search strategies
10	Databases and registries searched	6, Methods, paragraph 5, Search strategies
11	Search software used, name and version, including special features used (eg, explosion)	Online supplement, Appendix 1, page 2-3
12	Use of hand searching (eg, reference lists of obtained articles)	6, Methods, paragraph 5, Search strategies
13	List of citations located and those excluded, including justification	8, Results, paragraph 1 and Appendix 4, citation of excluded shortlisted studies
14	Method of addressing articles published in languages other than English	N/A
15	Method of handling abstracts and unpublished studies	N/A
16	Description of any contact with authors	6, Methods, paragraph 5, Search strategies
Reporting of methods should include		
17	Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	5-6, Methods, setting, population, predictive/prognostic factor, outcome; Appendix 2, Data extraction and management,

		Measures of association between the predictive or prognostic factor and the outcome
18	Rationale for the selection and coding of data (eg, sound clinical principles or convenience)	6-7, Data analysis (following CHARMS checklist), Appendix 2, Data extraction and management
19	Documentation of how data were classified and coded (eg, multiple raters, blinding and interrater reliability)	6-7, Data analysis (following CHARMS checklist), Appendix 2, Data extraction and management
20	Assessment of confounding (eg, comparability of cases and controls in studies where appropriate)	7, Risk of bias assessment, Methods, Data analysis, paragraph 3 and Appendix 2, Risk of bias assessment of included studies.
21	Assessment of study quality, including blinding of quality assessors, stratification or regression on possible predictors of study results	7, Risk of bias assessment, Methods, Data analysis, paragraph 3 and Appendix 2, Risk of bias assessment of included studies.
22	Assessment of heterogeneity	7, Methods, Data analysis, paragraph 5 and Appendix 2, Dealing with heterogeneity
23	Description of statistical methods (eg, complete description of fixed or random effects models, justification of whether the chosen models account for predictors of study results, dose-response models, or cumulative meta-analysis) in sufficient detail to be replicated	7. Methods, Data analysis, paragraph 5 and Appendix 2, Data synthesis and meta-analysis approaches
24	Provision of appropriate tables and graphics	Figures 1 (PRISMA),2,3 (RoB),4 (Forest plot)
Reporting of results should include		
25	Graphic summarizing individual study estimates and overall estimate	Figure 4 (Forest Plot of main analysis)
26	Table giving descriptive information for each study included	Table 1
27	Results of sensitivity testing (eg, subgroup analysis)	N/A
28	Indication of statistical uncertainty of findings	95 % CI included in all estimates.

Item No	Recommendation	Reported on Page No
Reporting of discussion should include		
29	Quantitative assessment of bias (eg, publication bias)	12, Discussion,

		paragraph 2; page 12, Discussion, paragraph 4 and Appendix 6, GRADE certainty of evidence rating
30	Justification for exclusion (eg, exclusion of non-English language citations)	N/A
31	Assessment of quality of included studies	3, Abstract, Results, paragraph 1; 11-12, Results, RoB of included studies.
Reporting of conclusions should include		
32	Consideration of alternative explanations for observed results	12, Discussion, paragraph 1-2 and 14, Conclusions
33	Generalization of the conclusions (ie, appropriate for the data presented and within the domain of the literature review)	4, Abstract, Interpretation, 14, Conclusions
34	Guidelines for future research	14, Conclusions
35	Disclosure of funding source	4, Abstract, funding, 7, Methods, paragraph 10.

From: Stroup DF, Berlin JA, Morton SC, et al, for the Meta-analysis Of Observational Studies in Epidemiology (MOOSE) Group. Meta-analysis of Observational Studies in Epidemiology. A Proposal for Reporting. *JAMA*. 2000;283(15):2008-2012. doi: 10.1001/jama.283.15.2008.