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Lampiran 1. Checklist Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020

PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	

PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	
Study characteristics	17	Cite each included study and present its characteristics.	
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	
	23b	Discuss any limitations of the evidence included in the review.	
	23c	Discuss any limitations of the review processes used.	
	23d	Discuss implications of the results for practice, policy, and future research.	
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	
Competing interests	26	Declare any competing interests of review authors.	
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	

Lampiran 2. Checklist "Consolidated Standards of Reporting Trials Statement (CONSORT) 2010

Table 1 | CONSORT 2010 checklist of information to include when reporting a randomised trial*

Section/Topic	Item No	Checklist item	Reported on page No
Title and abstract			
	1a	Identification as a randomised trial in the title	
	1b	Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts[45 65])	
Introduction			
Background and objectives	2a	Scientific background and explanation of rationale	
	2b	Specific objectives or hypotheses	
Methods			
Trial design	3a	Description of trial design (such as parallel, factorial) including allocation ratio	
	3b	Important changes to methods after trial commencement (such as eligibility criteria), with reasons	
Participants	4a	Eligibility criteria for participants	
	4b	Settings and locations where the data were collected	
Interventions	5	The interventions for each group with sufficient details to allow replication, including how and when they were actually administered	
Outcomes	6a	Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed	
	6b	Any changes to trial outcomes after the trial commenced, with reasons	
Sample size	7a	How sample size was determined	
	7b	When applicable, explanation of any interim analyses and stopping guidelines	
Randomisation:			
Sequence generation	8a	Method used to generate the random allocation sequence	
	8b	Type of randomisation; details of any restriction (such as blocking and block size)	
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	
Implementation	10	Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions	
Blinding	11a	If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how	
	11b	If relevant, description of the similarity of interventions	
Statistical methods	12a	Statistical methods used to compare groups for primary and secondary outcomes	
	12b	Methods for additional analyses, such as subgroup analyses and adjusted analyses	
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	
	13b	For each group, losses and exclusions after randomisation, together with reasons	
Recruitment	14a	Dates defining the periods of recruitment and follow-up	
	14b	Why the trial ended or was stopped	
Baseline data	15	A table showing baseline demographic and clinical characteristics for each group	
Numbers analysed	16	For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups	
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)	
	17b	For binary outcomes, presentation of both absolute and relative effect sizes is recommended	
Ancillary analyses	18	Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory	
Harms	19	All important harms or unintended effects in each group (for specific guidance see CONSORT for harms[42])	
Discussion			
Limitations	20	Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses	
Generalisability	21	Generalisability (external validity, applicability) of the trial findings	
Interpretation	22	Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence	
Other information			
Registration	23	Registration number and name of trial registry	
Protocol	24	Where the full trial protocol can be accessed, if available	
Funding	25	Sources of funding and other support (such as supply of drugs), role of funders	

Lampiran 3. Checklist Newcastle-Ottawa Scale (NOS) untuk desain penelitian Case Control

NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE
CASE CONTROL STUDIES

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability.

Selection

1) Is the case definition adequate?
   a) yes, with independent validation ✸
   b) yes, eg record linkage or based on self reports
   c) no description

2) Representativeness of the cases
   a) consecutive or obviously representative series of cases ✸
   b) potential for selection biases or not stated

3) Selection of Controls
   a) community controls ✸
   b) hospital controls
   c) no description

4) Definition of Controls
   a) no history of disease (endpoint) ✸
   b) no description of source

Comparability

1) Comparability of cases and controls on the basis of the design or analysis
   a) study controls for _____ (Select the most important factor.) ✸
   b) study controls for any additional factor ✸ (This criteria could be modified to indicate specific control for a second important factor.)

Exposure

1) Ascertainment of exposure
   a) secure record (eg surgical records) ✸
   b) structured interview where blind to case/control status ✸
   c) interview not blinded to case/control status
   d) written self report or medical record only
   e) no description

2) Same method of ascertainment for cases and controls
   a) yes ✸
   b) no

3) Non-Response rate
   a) same rate for both groups ✸
   b) non respondents described
   c) rate different and no designation

Lampiran 4. *Checklist Newcastle-Ottawa Scale* (NOS) untuk desain penelitian *Cohort*

NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE
COHORT STUDIES

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Outcome categories. A maximum of two stars can be given for Comparability

Selection

1) Representativeness of the exposed cohort
   a) truly representative of the average _____ (describe) in the community ✸
   b) somewhat representative of the average _____ in the community ✸
   c) selected group of users eg nurses, volunteers
   d) no description of the derivation of the cohort

2) Selection of the non exposed cohort
   a) drawn from the same community as the exposed cohort ✸
   b) drawn from a different source
   c) no description of the derivation of the non exposed cohort

3) Ascertainment of exposure
   a) secure record (eg surgical records) ✸
   b) structured interview ✸
   c) written self report
   d) no description

4) Demonstration that outcome of interest was not present at start of study
   a) yes ✸
   b) no

Comparability

1) Comparability of cohorts on the basis of the design or analysis
   a) study controls for _____ (select the most important factor) ✸
   b) study controls for any additional factor ✸ (This criteria could be modified to indicate specific control for a second important factor.)

Outcome

1) Assessment of outcome
   a) independent blind assessment ✸
   b) record linkage ✸
   c) self report
   d) no description

2) Was follow-up long enough for outcomes to occur
   a) yes (select an adequate follow up period for outcome of interest) ✸
   b) no

3) Adequacy of follow up of cohorts
   a) complete follow up - all subjects accounted for ✸
   b) subjects lost to follow up unlikely to introduce bias - small number lost - > ____ % (select an adequate %) follow up, or description provided of those lost) ✸
   c) follow up rate < ____% (select an adequate %) and no description of those lost
   d) no statement

Lampiran 5. Parameter yang Diukur Pada Tiap Studi

Penulis	Outcome				
	Volume Kehilangan darah	Transfusi Darah	Kejadian Infeksi	*Range of Motion*	Lama Rawat di Rumah Sakit
Li et al.	√	√	√	√	×
Demirkale et al.	√	√	√	×	√
Kęska et al.	√	√	×	√	√
Märdian et al.	√	√	×	√	×
Wang, Xu et al.	√	√	√	√	√
Sharma et al.	√	×	√	√	√
Watanabe et al.	√	×	√	√	×
Zhou, Wang et al.	√	√	√	√	√
Yin et al.	√	√	×	√	√
Maniar, Pradhan et al.	√	√	√	√	×
Goyal et al.	√	√	√	×	√

Lampiran 6. Metode Pengukuran Pada Tiap Studi

Penulis	Metode Pengukuran				
	Volume Kehilangan darah	**Transfusi Darah**	**Kejadian Infeksi**	***Range of Motion***	**Lama Rawat di Rumah Sakit**
Li et al.	Kehilangan darah post op yang terlihat diukur dengan mengukur pertambahan berat dari kasa dan volume darah pada drain (apabila menggunakan drain). Total kehilangan darah diukur dengan melihat tinggi, berat badan pasien, pre op dan post op hematokrit. Jumlah kehilangan darah yang tersembunyi diukur dengan mengurangi jumlah volume kehilangan darah yang terlihat dari total kehilangan darah.	Transfusi darah PRC diberikan ketika didapatkan kadar Hb <10 g/dl	NA	fleksi aktif genu	Tidak dilakukan penilaian
Demirkale et al.	Menghitung kadar Hb post operatif	Diberikan *Erythrocyte suspension* ketika didapatkan Hb ≤7.9 g/dL atau dengan Hb 8-10 g/dL dengan denyut	Tanda infeksi apabila ditemukan eritema dan pembengkakan pada genu, terjadi peningkatan laju endap	Tidak dilakukan penilaian	NA

		jantung >120 atau tekanan darah sistolik <90mmHg pada hari ke-3 post operatif	darah, *C-reactive protein*. Terjadi *deep infection* apabila didapatkan hasil kultur positif.		
Kęska et al.	Pada awal post operatif dilakukan pencatatan pada kadar Hb dan Hct (8 jam, 1 hari, dan 2 hari post operatif) Perkiraan kehilangan darah dihitung dengan menggunakan rumus Gross.[25] *Total measured blood loss* (TMBL) dihitung dengan menjumlahkan kehilangan darah intra operatif yang dicatat oleh dokter anestesi dengan jumlah volume darah pada drain. Hidden blood loss (HBL) dihitung dengan mengurangkan TMBL dari CBL.	Diberikan apabila Hb <7.5 g/dL dengan gejala anemia	Tidak dilakukan penilaian	fleksi dan ekstensi genu	NA

Märdian et al.	*Estimated Blood Volume* dihitung dengan menggunakan rumus dari *Nadler et al*.[26] Volume total kehilangan diukur dengan menghitung selisih volume darah pre dan post op.	Diberikan ketika Hb <8 g/dL	Tidak dilakukan penilaian	NA	Tidak dilakukan penilaian
Wang, Xu et al.	Total kehilangan darah post op dihitung dengan mengurangi volume darah post op dengan total darah pre op. Perkiraan kehilangan darah dihiting dengan menggunakan rumus Gross[25] dengan melihat perbedaan kadar Hct pada tiap waktu. Total volume darah pada drain dikonversi ke volume eritrosit dengan meratakan pada Hct perioperative. Kehilangan darah tersembunyi dihitung dengan mengurangi	Diberikan apabila kadar Hb <7 g/dL atau Hb 7-10 g/dL dengan gejala	NA	fleksi dan ekstensi genu	kriteria dipulangkan adalah fleksi genu 90º, ASLR, dan *independent stair climbing*

	volume darah pada drain dengan total kehilangan darah.				
Sharma et al.	Kadar Hb pre dan post operatif	Tidak dilakukan penilaian	NA	NA	NA
Watanabe et al.	Penurunan kadar Hb post operatif	Tidak dilakukan penilain	NA	fleksi dan ekstensi	Tidak dilakukan penilaian
Zhou, Wang et al.	Pencatatan kadar Hb pada hari ke-1,3,5, dan minggu ke-3 post operatif. Estimasi volume darah dihitung dengan menggunakan rumus dari *Nadler et al.*[26] Kehilangan darah intraoperatif dihitung dengan melihat kenaikan berat pada kain kasa ditambah dengan volume pada botol aspirasi. Kehilangan darah tersembunyi dihitung dengan rumus Gross.[25] Volume kehilangan darah post operatif dihitung dengan	Diberikan apabila kadar Hb <8 g/dL atau kadar Hb <9 g/dL dengan takikardi, dispneu, dan hipotensi	NA	fleksi dan ekstensi genu secara aktif menggunakan *long arm geniometer*	NA

	menjumlahkan volume darah pada drain dan berat pada kain kasa.				
Yin et al.	Pencacatan kadar Hb dan Hct pre dan post op (d1,d2,d3,m6). Total kehilangan darah dihitung dengan menggunakan rumus Gross.[25] Estimasi volume darah dihitung dengan menggunakan rumus *Nadler et al*.[26] Volume kehilangan darah tersembunyi dihitung dengan mengurangi volume kehilangan darah terlihat (intraoperatif dan pada drain) dari total kehilangan darah.	Diberikan apabila kadar Hb <7-8 g/dL dengan gejala atau kadar Hb 8-10 g/dL pada pasien yang sebelumnya memiliki faktor resiko untuk terjadinya komplikasi, seperti infark miokard, arteriosklerosis, penyakit vaskular, dll.	Tidak dilakukan penilain	fleksi dan ekstensi genu	NA
Maniar, Pradhan et al.	Estimasi volume darah dihitung dengan menggunakan rumus dari *Nadler et al*.[26]	Diberikan apabila kadar Hb <8 g/dL dengan gejala takikardia, takipneu, dan penurunan kemampuan untuk melakukan latihan	Apabila pasien demam pada hari ke-2 post op dan terjadi peningkatan leukosit, C-reactive Protein, laju endap	fleksi genu	Tidak dilakukan penilaian

	Perhitungan total kehilangan darah dihitung dengan metode *Hemoglobin balance*.		darah , dan adanya discharge pada daerah operasi		
Goyal et al.	Perbandingan penurunan kadar Hb drop post operatif dengan kadar Hb pre operatif.	Diberikan apabila volume darah pada drain sebanyak 500 ml (perdarahan terus-menerus) dalam waktu 24 jam post op dengan penurunan Hb sebanyak 4 g/dL atau total kadar penurunan Hb sampai <8 g/dL	NA	Tidak dilakukan penilaian	NA