Supplementary Material for: "Comparative efficacy of traditional non-selective NSAIDs and selective cycloxygenase-2 inhibitor in patients with acute gout: a systematic review and meta-analysis"

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Figure S1. Risk of bias summary
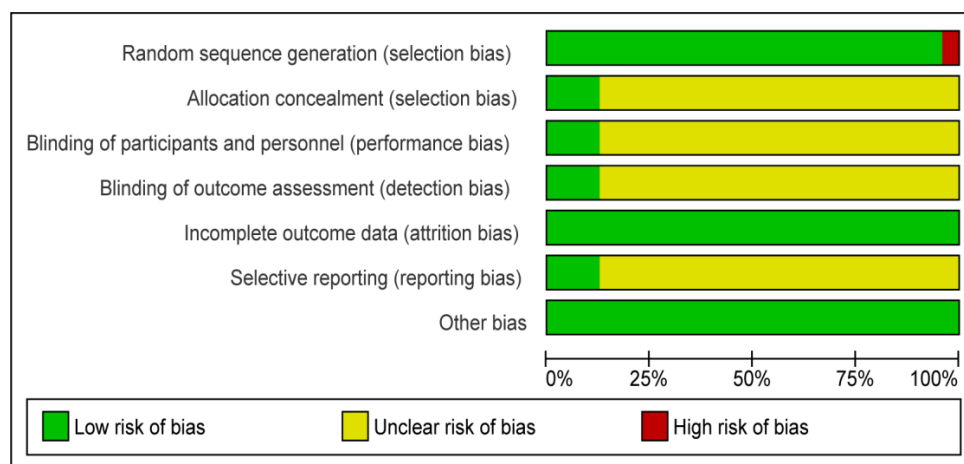
Figure S2. Risk of bias graph

Table S1. Detailed search strategy

PubMed		
Search	Query	Number
#3	Search ((((gout) OR gouty arthritis) OR acute gout)) AND (((Etoricoxib) OR Celecoxib) OR Meloxicam)	61
#2	Search ((gout) OR gouty arthritis) OR acute gout	18847
#1	Search ((Etoricoxib) OR Celecoxib) OR Meloxicam	9404
Web of Science		
# 3	#2 AND #1 Databases = WOS, BIOSIS, CSCD, DIIDW, INSPEC, KJD, MEDLINE, RSCI, SCIELO. Timespan=All years; Search language=Auto	183
# 2	TOPIC: (gout) OR TOPIC: (gouty arthritis) OR TOPIC: (acute gout) Databases = WOS, BIOSIS, CSCD, DIIDW, INSPEC, KJD, MEDLINE, RSCI, SCIELO. Timespan=All years; Search language=Auto	36,548
# 1	TOPIC: (Etoricoxib) OR TOPIC: (Celecoxib) OR TOPIC: (Meloxicam) Databases = WOS, BIOSIS, CSCD, DIIDW, INSPEC, KJD, MEDLINE, RSCI, SCIELO. Timespan=All years; Search language=Auto	19,277
Embase		
# 3	#2 AND #3	308
# 2	'gout'/exp OR gout OR 'gouty arthritis'/exp OR 'gouty arthritis' OR (gouty AND ('arthritis'/exp OR arthritis)) OR 'acute gout'/exp OR 'acute gout' OR (acute AND ('gout'/exp OR gout))	28,967
# 1	'etoricoxib'/exp OR etoricoxib OR 'celecoxib'/exp OR celecoxib OR 'meloxicam'/exp OR meloxicam	29,285
CNKI		
	(依托考昔 and 痛风）OR（塞来昔布 and 痛风) OR (美洛昔康 and 痛风)	214
	(Etoricoxib and Gout) OR (Celecoxib and Gout) OR (Meloxicam and Gout)	214
Wangfang		
	主题:(痛风)*主题:(美洛昔康) Etoricoxib and Gout	97
	主题:(痛风)*主题:(塞来昔布) Celecoxib and Gout	121
	主题:(痛风)*主题:(依托考昔) Meloxicam and Gout	107
	(依托考昔 and 痛风）OR (塞来昔布 and 痛风) OR (美洛昔康 and 痛风)	325
	(Etoricoxib and Gout) OR (Celecoxib and Gout) OR (Meloxicam and Gout)	325

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Table S2: Summary of findings: COXIBs vs traditional NSAIDs for acute gout

COXIBs compared to traditional NSAIDs for acute gout

Patient or population: acute gout

Setting:

Intervention: COXIBs

Comparison: traditional NSAIDs

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with traditional NSAIDs	Risk difference with COXIBs
Pain Likert scale	593 (4 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.15 SD lower** (0.31 lower to 0.01 higher)
Pain Likert scale - Etoricoxib 120 mg qd vs Indomethacin 50 mg tid	513 (3 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.09 lower** (0.27 lower to 0.08 higher)
Pain Likert scale - Etoricoxib 120 mg qd vs Diclofenac 75 mg qd	80 (1 RCT)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.53 lower** (0.98 lower to 0.09 lower)
Pain VAS scale	741 (6 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **1.95 SD lower** (3.46 lower to 0.044 lower)
Pain VAS scale - Etoricoxib 120 mg qd vs Diclofenac 75 mg bid	426 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **1.63 SD lower** (460 lower to 1.34 higher)

COXIBs compared to traditional NSAIDs for acute gout

Patient or population: acute gout

Setting:

Intervention: COXIBs

Comparison: traditional NSAIDs

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with traditional NSAIDs	Risk difference with COXIBs
Pain VAS scale - Etoricoxib 120 mg qd vs Diclofenac 75 mg qd	155 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **1.82 SD lower** (5.18 lower to 1.53 higher)
Pain VAS scale - Celecoxib 200 mg qd vs Diclofenac 100 mg qd	160 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **2.41 lower** (5.91 lower to 1.09 higher)
Response rate	382 (3 RCTs)	⊕⊕⊕⊕ HIGH	**OR 6.71** (2.88 to 15.64)	805 per 1,000	**160 more per 1,000** (118 more to 180 more)
C-reactive protein	674 (5 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.88 SD lower** (1.63 lower to 0.12 lower)
C-reactive protein-Pain VAS scale - Etoricoxib 120 mg qd vs Diclofenac 75 mg bid	426 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **1.15 SD lower** (3.09 lower to 0.79 higher)

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COXIBs compared to traditional NSAIDs for acute gout

Patient or population: acute gout

Setting:

Intervention: COXIBs

Comparison: traditional NSAIDs

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with traditional NSAIDs	Risk difference with COXIBs
C-reactive protein-Pain VAS scale - Etoricoxib 120 mg qd vs Diclofenac 75 mg qd	249 (3 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.69 SD lower** (1.35 lower to 0.04 lower)
Patient's global assessment of response	511 (3 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.1 SD lower** (0.27 lower to 0.07 higher)
Investigator's global assessment of response	509 (3 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.29 SD lower** (0.46 lower to 0.11 lower)
Inflammation swelling	321 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.25 lower** (0.74 lower to 0.24 higher)
Onset of efficacy (h) - Etoricoxib 120 mg qd vs Diclofenac 75 mg qd	113 (1 RCT)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.94 lower** (1.33 lower to 0.55 lower)

COXIBs compared to traditional NSAIDs for acute gout

Patient or population: acute gout

Setting:

Intervention: COXIBs

Comparison: traditional NSAIDs

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with traditional NSAIDs	Risk difference with COXIBs

*__The risk in the intervention group__ (and the associated 95% confidence interval) is based on the assumed risk in the comparison group and the __relative effect__ of the intervention (and the associated 95% CI).

CI: Confidence interval; **SMD:** Standardized mean difference; **OR:** Odds ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

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Table S3: Summary of findings: one COXIB vs another COXIB for acute gout

Another COXIBs compared to one COXIBs for acute gout

Patient or population: acute gout

Setting:

Intervention: another COXIBs

Comparison: one COXIBs

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with one COXIBs	Risk difference with another COXIBs
Pain Likert scale	292 (3 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **0.56 lower** (1.1 lower to 0.02 lower)
Pain VAS scale	436 (6 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **2.82 SD lower** (4.01 lower to 1.62 lower)
Pain VAS scale - Etoricoxib 120 mg qd vs Celecoxib 200 mg tid	312 (4 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **2.36 lower** (3.36 lower to 1.37 lower)
Pain VAS scale - Etoricoxib 120 mg qd vs Meloxicam 15 mg qd	124 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **4.02 SD lower** (10.28 lower to 2.24 higher)
Response rate-Etoricoxib 120 mg qd vs Celecoxib 200 mg bid	216 (3 RCTs)	⊕⊕⊕⊕ HIGH	**OR 4.84** (2.19 to 10.72)	694 per 1,000	**222 more per 1,000** (138 more to 266 more)

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Another COXIBs compared to one COXIBs for acute gout

Patient or population: acute gout

Setting:

Intervention: another COXIBs

Comparison: one COXIBs

Outcomes	№ of participants (studies) Follow-up	Certainty of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with one COXIBs	Risk difference with another COXIBs
C-reactive protein	140 (2 RCTs)	⊕⊕⊕⊕ HIGH	-	-	SMD **1.98 SD lower** (4.9 lower to 0.95 higher)
Onset of efficacy (h)-Etoricoxib 120 mg qd vs Meloxicam 15 mg qd	84 (1 RCT)	⊕⊕⊕⊕ HIGH	-	-	SMD **1.57 lower** (2.07 lower to 1.08 lower)

***The risk in the intervention group** (and the associated 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and the associated 95% CI).

CI: Confidence interval; **SMD:** Standardized mean difference; **OR:** Odds ratio

GRADE Working Group grades of evidence
High certainty: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate certainty: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low certainty: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low certainty: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect