

Supplemental Table 1. GRADE Analyses: ketamine in electroconvulsive therapy for major depressive disorder

Primary and secondary outcome	Active arms (N)	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Large effect	Overall quality of evidence ^d
Ketamine versus propofol								
Depressive symptoms at day 1 after a single ECT session	83 (3)	Serious ^a	Serious ^b	No	Serious ^c	Undetected	No	+/-/-/-; Very Low
Depressive symptoms at day 3 after a single ECT session	41 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
Depressive symptoms at day 7 after a single ECT session	41 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
<i>Seizure duration (s)</i>	86 (3)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
<i>Seizure energy index (uV²)</i>	41 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
<i>Open eyes (min)</i>	68 (2)	Serious ^a	Serious ^b	No	Serious ^c	Undetected	No	+/-/-/-; Very Low
<i>Hypertension</i>	92 (3)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
<i>Nausea and vomiting</i>	92 (3)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
Ketamine plus propofol versus propofol								
Depressive symptoms at day 1 after a single ECT session	44 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
Depressive symptoms at day 3 after a single ECT session	44 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
Depressive symptoms at day 7 after a single ECT session	44 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low
<i>Seizure duration (s)</i>	89 (3)	Serious ^a	Serious ^b	No	Serious ^c	Undetected	No	+/-/-/-; Very Low
<i>Seizure energy index (uV²)</i>	44 (2)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low

<i>Open eyes (min)</i>	67 (2)	Serious ^a	Serious ^b	No	Serious ^c	Undetected	No	+/-/-/-; Very Low
<i>Hypertension</i>	91 (3)	Serious ^a	No	No	Serious ^c	Undetected	No	+/-/-/-; Low

^aAll studies reported as having a serious bias used an open-label method, only mentioned random allocation without describing the method and withdrawal from the study.

^bMeta-analytic results presented a serious inconsistency when I^2 values were greater than 50% or $P < 0.1$ in the Q statistics.

^cFor continuous outcomes, $N < 400$; For dichotomous outcomes, $N < 300$.

^dGRADE Working Group grades of evidence: High quality=further research is very unlikely to change our confidence in the estimate of effect. Moderate quality=further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate. Low quality=further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate. Very low quality=we are very uncertain about the estimate.

Abbreviations: GRADE=grading of recommendations assessment, development, and evaluation; ECT=electroconvulsive therapy.

Supplemental Figure 1. Cochrane risk of bias

	Random sequence generation (selection bias)	?	-	?	+	+	+	?
	Allocation concealment (selection bias)	?	-	?	+	+	+	?
	Blinding of participants and personnel	?	-	?	-	+	+	?
	assessment (Symptom reduction, response)	?	-	?	+	+	+	?
	Incomplete outcome data addressed (attrition bias)	?	+	?	+	+	+	?
	Selective reporting (reporting bias)	?	+	?	+	+	+	?
	Other sources of bias	?	?	?	+	+	+	?
Wang et al., 2012	?	?	?	?	+	+	+	?
Xu et al., 2013	-	-	-	-	+	+	+	?
Yalcin et al., 2012	?	+	?	?	+	+	+	?
Zhao et al., 2016	?	-	-	-	+	+	+	?

+ : Low risk of bias, - : High risk of bias, ? : Unclear risk of bias