CQ 18-7 小児敗血症性ショックに対して第一選択の循環作動薬としてドパミンを使用するか？

検索データベース

☑MEDLINE (PubMed/Ovid)
☑CENTRAL
☑医学中央雑誌
☐その他（　　）

検索式とヒット数

PubMed search strategy（検索日　2019 年　4 月　18 日）

#1	Adolescent[Mesh] OR Child[Mesh] OR "Child, Preschool"[Mesh] OR Infant[Mesh] OR "Infant, Newborn"[Mesh] OR Adolescent[tiab] OR Adolescence[tiab] OR Child[tiab] OR Children[tiab] OR Infant[tiab] OR Infantile[tiab] OR Newborn[tiab] OR Neonate[tiab] OR Neonatal[tiab] OR Pediatric[tiab] OR Paediatric[tiab] OR Pediatrics[tiab] OR Paediatrics[tiab]	3878771
#2	"Shock, Septic"[Mesh] OR Sepsis[Mesh] OR "Neonatal Sepsis"[Mesh] OR Shock[Mesh] OR "Systemic Inflammatory Response Syndrome"[Mesh] OR "Multiple Organ Failure"[Mesh] OR Hypotension[mesh] OR Vasodilation[mesh] OR Septic[tiab] OR Shock[tiab] OR Sepsis[tiab] OR "Systemic Inflammatory Response Syndrome"[tiab] OR SIRS[tiab] OR "Multiple Organ Failure"[tiab] OR MOF[tiab] OR Hypotension[tiab] OR Vasodilation[tiab] OR Hypotensive[tiab] OR Vasodilatory[tiab]	476395
#3	Dopamine[Mesh] OR "Dopamine Agonists"[Mesh] OR Dopamine[tiab]	146541
#4	randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab] NOT (animals [mh] NOT humans [mh])	3882822
#5	#1 AND #2 AND #3 AND #4	311

CENTRAL search strategy（検索日　2019 年　4 月　18 日）

#1	MeSH descriptor: [Adolescent] explode all trees	98970
#2	MeSH descriptor: [Child] explode all trees	1142
#3	MeSH descriptor: [Child, Preschool] explode all trees	391
#4	MeSH descriptor: [Infant] explode all trees	15207
#5	MeSH descriptor: [Infant, Newborn] explode all trees	14968
#6	(adolescent):ti,ab,kw	122359
#7	(child):ti,ab,kw	130265
#8	(children):ti,ab,kw	130263
#9	(infant):ti,ab,kw	45541
#10	(infantile):ti,ab,kw	2027
#11	(newborn):ti,ab,kw	24196
#12	(neonate):ti,ab,kw	1596
#13	(neonatal):ti,ab,kw	15537
#14	(pediatric):ti,ab,kw	27701
#15	(paediatric):ti,ab,kw	27692
#16	(pediatrics):ti,ab,kw	3545
#17	(paediatrics):ti,ab,kw	3543
#18	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17	245504
#19	MeSH descriptor: [Shock, Septic] explode all trees	771
#20	MeSH descriptor: [Sepsis] explode all trees	3998
#21	MeSH descriptor: [Neonatal Sepsis] explode all trees	39
#22	MeSH descriptor: [Systemic Inflammatory Response Syndrome] explode all trees	4328
#23	MeSH descriptor: [Multiple Organ Failure] explode all trees	384
#24	MeSH descriptor: [Hypotension] explode all trees	1989
#25	MeSH descriptor: [Vasodilation] explode all trees	2061
#26	MeSH descriptor: [Shock] explode all trees	1946
#27	(sepsis):ti,ab,kw	10248
#28	(septic):ti,ab,kw	4108
#29	(shock):ti,ab,kw	9214
#30	(Systemic Inflammatory Response Syndrome):ti,ab,kw	1194
#31	(SIRS):ti,ab,kw	676
#32	(Multiple Organ Failure):ti,ab,kw	1667

#33	(MOF):ti,ab,kw	141
#34	(Hypotension):ti,ab,kw	13970
#35	(Hypotensive):ti,ab,kw	2880
#36	(vasodilation):ti,ab,kw	3827
#37	(vasodilatory):ti,ab,kw	925
#38	#19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36	41077
#39	MeSH descriptor: [Dopamine] explode all trees	1225
#40	MeSH descriptor: [Dopamine Agonists] explode all trees	600
#41	(dopamine):ti,ab,kw	7463
#42	#39 OR #40 OR #41	7492
#43	#18 AND #38 AND #42	133

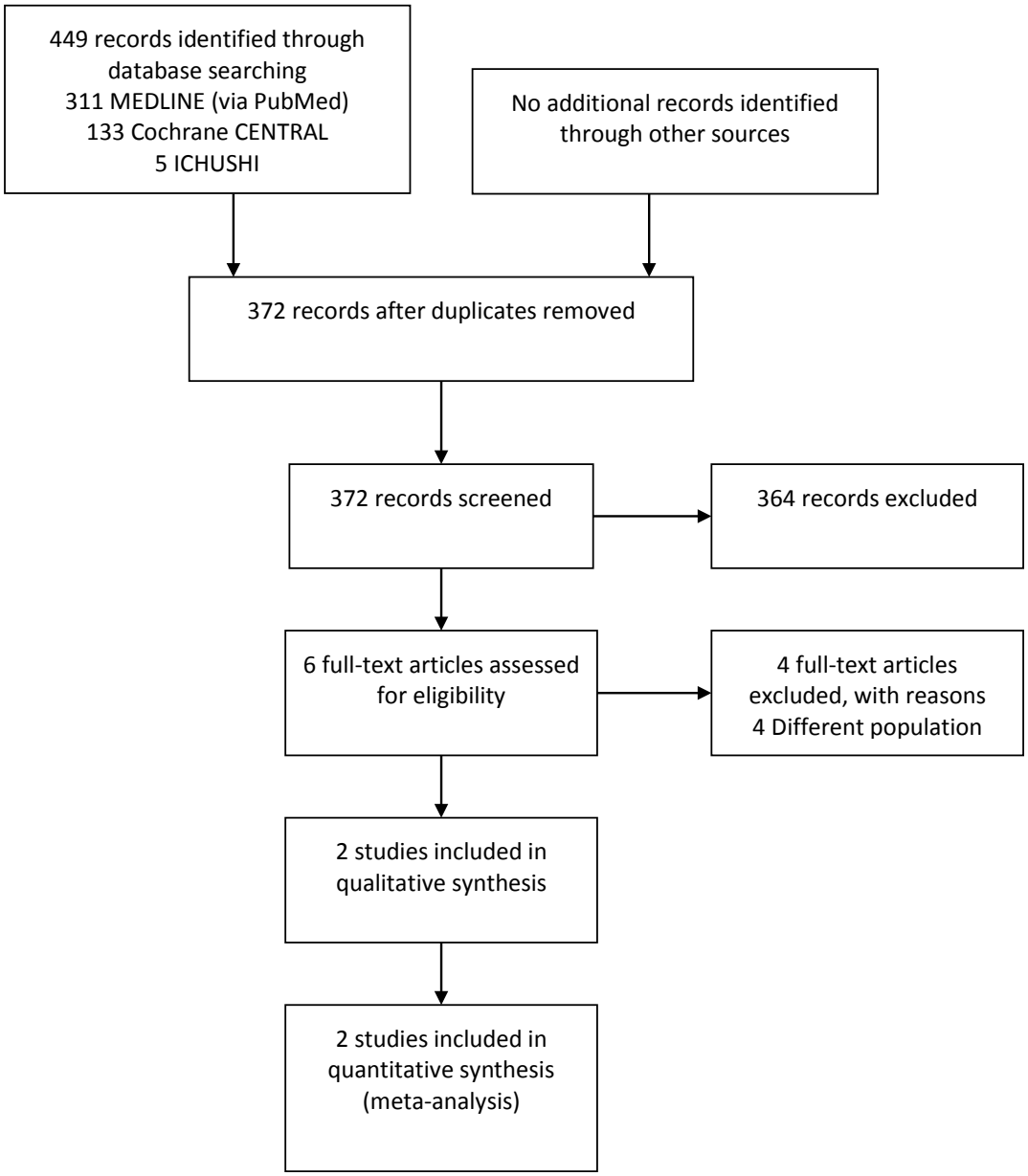
125 trials

医学中央雑誌 search strategy（検索日 2019 年 4 月 18 日）

#1	((青年/TH or 青年/TA)) and (PT=会議録除く)	7066
#2	((小児/TH or 小児/TA)) and (PT=会議録除く)	188404
#3	((幼児/TH or 幼児/TA)) and (PT=会議録除く)	26108
#4	((乳児/TH or 乳児/TA)) and (PT=会議録除く)	37727
#5	((新生児/TH or 新生児/TA)) and (PT=会議録除く)	55145
#6	((小学生/TH or 小学生/TA)) and (PT=会議録除く)	6177
#7	((中学生/TH or 中学生/TA)) and (PT=会議録除く)	6450
#8	(((中学生/TH or 小学生/TH) or 学童/TA)) and (PT=会議録除く)	11575
#9	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8	266227
#10	((敗血症/TH or 敗血症/TA)) and (PT=会議録除く)	22405
#11	((新生児敗血症/TH or 新生児敗血症/TA)) and (PT=会議録除く)	165
#12	((ショック-敗血症性/TH or ショック-敗血症性/TA)) and (PT=会議録除く)	5098
#13	((全身性炎症反応症候群/TH or 全身性炎症反応症候群/TA)) and (PT=会議録除く)	17730
#14	((多臓器不全/TH or 多臓器不全/TA)) and (PT=会議録除く)	6286
#15	((低血圧/TH or 低血圧/TA)) and (PT=会議録除く)	12200
#16	((血管拡張/TH or 血管拡張/TA)) and (PT=会議録除く)	8963
#17	((ショック/TH or ショック/TA)) and (PT=会議録除く)	32140

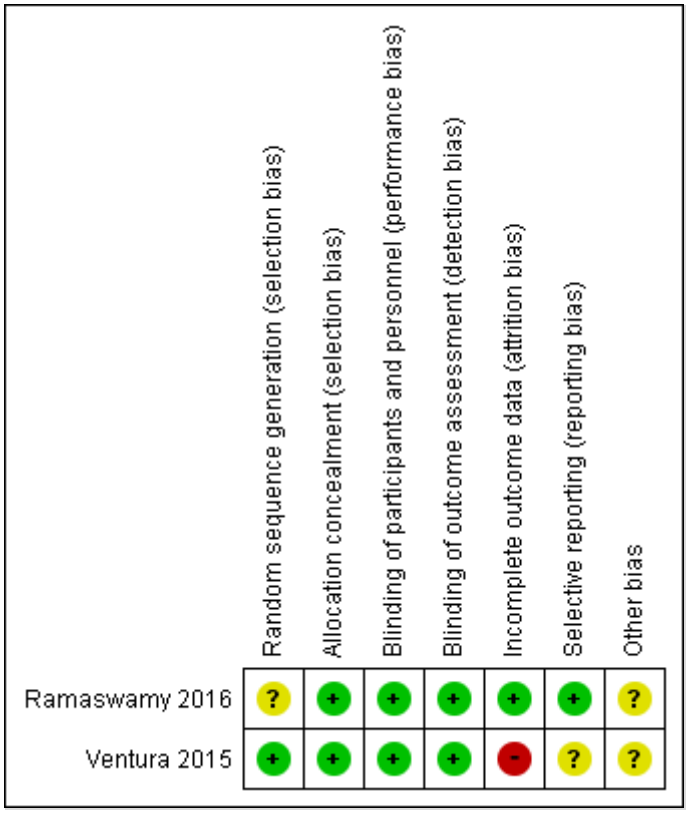
#18	#10 or #11 or #12 or #13 or #14 or #15 or #16 or #17	68257
#19	#9 and #18	4691
#20	ランダム化比較試験/TH or 準ランダム化比較試験/TH or ランダム化/AL or 無作為化/AL or 比較試験/AL or 臨床試験/AL or プラセボ/AL or 対照/AL or コントロール/AL or 臨床研究/AL	301704
#21	((Dopamine/TH or Dopamine/TA or ドパミン/TA or ドーパミン/TA)) and (PT=会議録除く)	11640
#22	(("Dopamine Agonists"/TH or "Dopamine Agonists"/TA)) and (PT=会議録除く)	4899
#23	#21 or #22	15492
#24	#19 and #20 and #23	5

PRISMA フロー図


449 records identified through database searching
311 MEDLINE (via PubMed)
133 Cochrane CENTRAL
5 ICHUSHI
No additional records identified through other sources
372 records after duplicates removed
372 records screened
364 records excluded
6 full-text articles assessed for eligibility
4 full-text articles excluded, with reasons
4 Different population
2 studies included in qualitative synthesis
2 studies included in quantitative synthesis (meta-analysis)

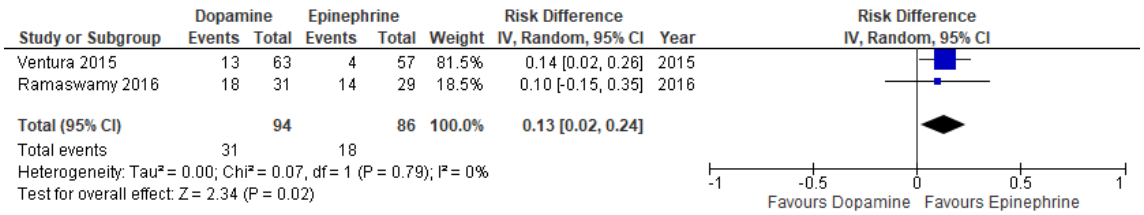
Risk of Bias サマリー

アウトカム①　28 日死亡率（28-day mortality）

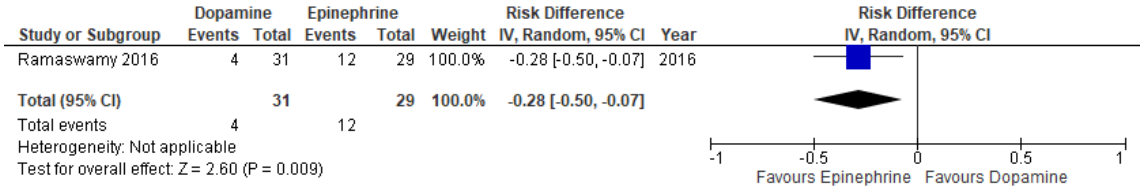


フォレストプロット

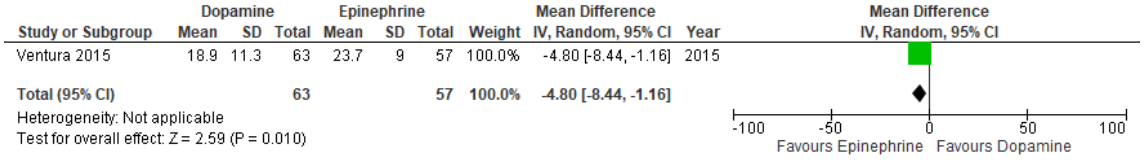
アウトカム①　28 日死亡率（28-day mortality）



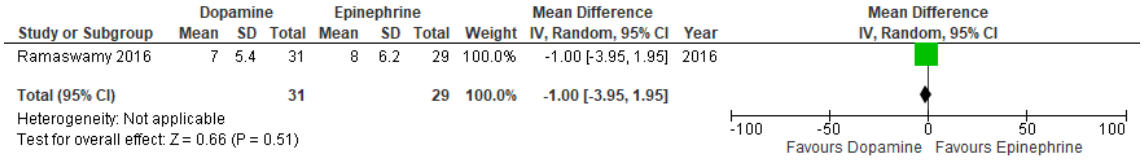
アウトカム②-1　1 時間以内のショック離脱率（Resolution of shock within first hour）



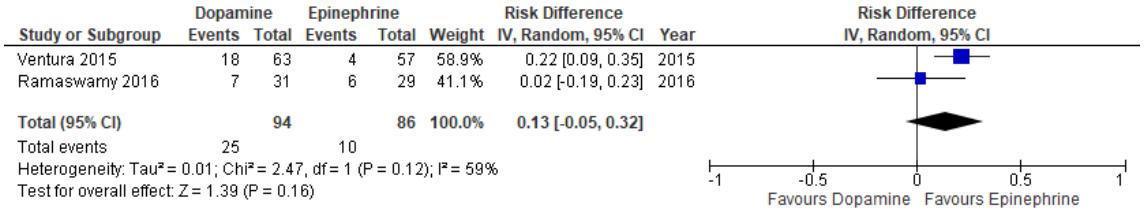
アウトカム②-2　血管作動薬離脱期間（Vasoactive drug-free days）



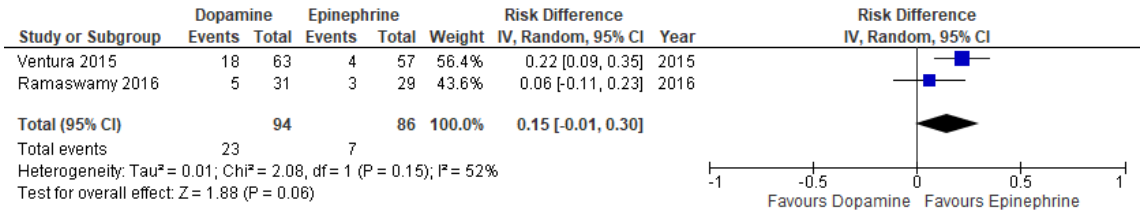
アウトカム③　PICU 滞在日数（Length of PICU stay, days）



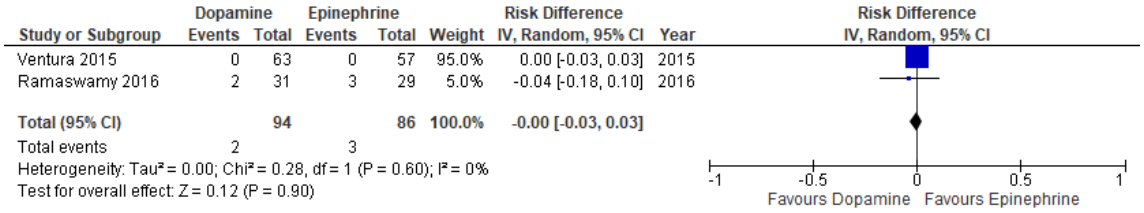
アウトカム④　あらゆる重篤な副作用（医療関連感染＋虚血）



アウトカム④-1　医療関連感染（Healthcare-associated infection）

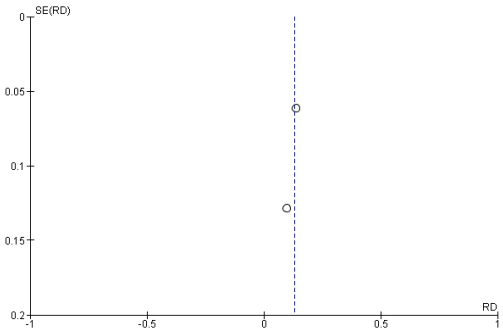


アウトカム④-2　虚血（Ischemic event）

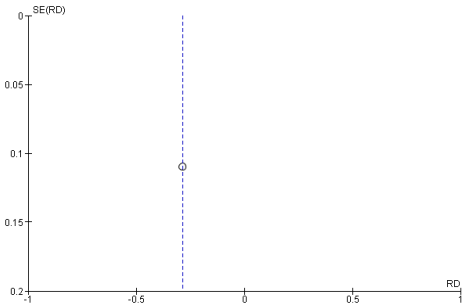

Dopamine
Epinephrine
Risk Difference
Risk Difference
Study or Subgroup
Events
Total
Events
Total
Weight
IV, Random, 95% CI
Year
IV, Random, 95% CI
Ventura 2015 0 63 0 57 95.0% 0.00 [-0.03, 0.03] 2015
Ramaswamy 2016 2 31 3 29 5.0% -0.04 [-0.18, 0.10] 2016
Total (95% CI) 94 86 100.0% -0.00 [-0.03, 0.03]
Total events 2 3
Heterogeneity: Tau² = 0.00; Chi² = 0.28, df = 1 (P = 0.60); I² = 0%
Test for overall effect: Z = 0.12 (P = 0.90)
-1
-0.5
0
0.5
1
Favours Dopamine
Favours Epinephrine

ファンネルプロット

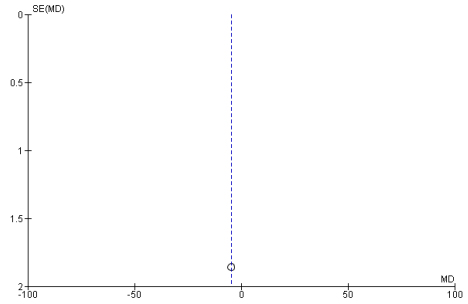
アウトカム①　28 日死亡率（28-day mortality）



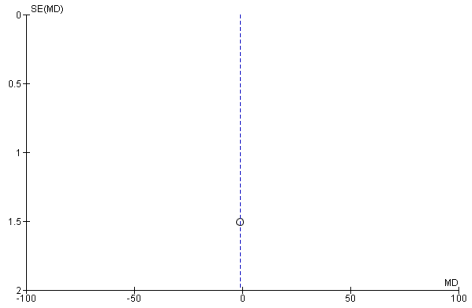
アウトカム②-1　1 時間以内のショック離脱率（Resolution of shock within first hour）



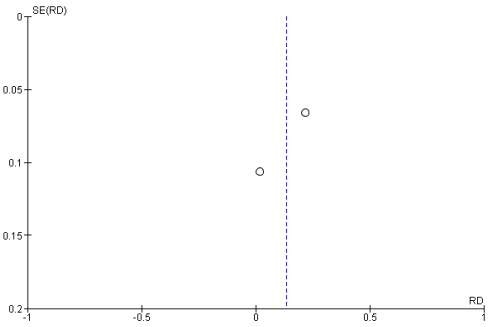
アウトカム②-2　血管作動薬離脱期間（Vasoactive drug-free days）



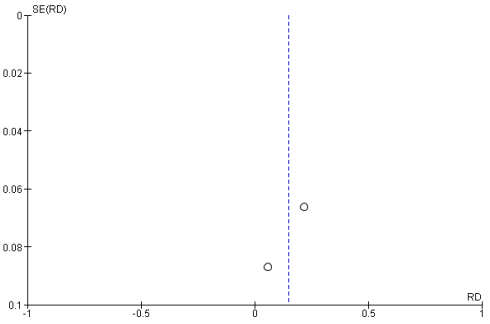
アウトカム③　PICU 滞在日数（Length of PICU stay, days）



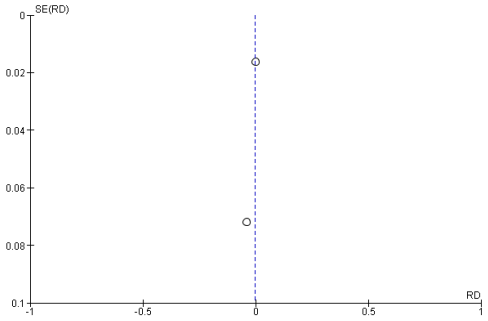
アウトカム④　あらゆる重篤な副作用（医療関連感染＋虚血）



アウトカム④-1　医療関連感染（Healthcare-associated infection）



アウトカム④-2　虚血（Ischemic event）


SE(RD)
0
0.02
0.04
0.06
0.08
0.1
-1
-0.5
0
0.5
1
RD