

Supplementary Table 1. The basic characteristics description of included studies

Study	Interventions		No. of patients		Gender (male/female)		Age (month)		Weight (kg)		Study Design
	DXM	CH	DX M	CH	DX M	CH	DXM	CH	DXM	CH	
V. M. Yuen ¹¹ 2017	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 50mg/kg	88	108	63/2 5	68/40	32.5(2-7 9)	24(8-70)	12(5-22)	11.6(7.5- 20)	A randomised controlled trial
Jason Reynolds ¹² 2016	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 50mg/kg	44	41	27/1 4	23/21	25.5(22- 29)	23.3(19 .5-27.2)	12.8(11. 8-13.9)	12.3(11.2 -13.4)	A prospective, randomized, double-blind trial
Jeff Miller ¹³ 2016	Intranasal dexmedetomidine 2µg/kg	Oral chloral hydrate 70mg/kg	50	50	33/1 7	24/26	13.7± 8.6	13.6± 7.6	9.5±2.3	8.9±2	a randomized clinical trial
	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 70mg/kg	50	50	27/2 3	24/26	15.4± 8.5	13.6± 7.6	9.7±2.3	8.9±2	
Hakan Gumus ¹⁴ 2015	Intranasal dexmedetomidine 2µg/kg	Oral chloral hydrate 50mg/kg	42	36	23/1 9	18/18	44.6± 20.7	47± 21.9	14.1± 3.6	14.1±4.2	A randomized, prospective study

	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 100mg/kg	42	40	23/1 9	21/19	45.1± 22.3	39.4± 11.2	14.1± 4.4	13±1.8	
Qianzhong Cao ¹⁵ 2017	Intranasal dexmedetomidine 2µg/kg	Oral chloral hydrate 80mg/kg	71	70	45/2 6	43/27	18± 10-25	14.5(8. 8-23.3)	10.5(9.5 -12)	10(8-12)	A randomised controlled trial
Wenhua Zhang ¹⁶ 2016	Intranasal dexmedetomidine 1µg/kg	Oral chloral hydrate 25mg/kg	50	50	30/1 8	19/21	3.3±1.6	3.8± 1.5	5.6±1.6	6.1±1.6	prospective, double-blind, randomized controlled trial
	Intranasal dexmedetomidine 2µg/kg	Oral chloral hydrate 25mg/kg	50	50	22/2 4	19/21	3.3±1.5	3.8± 1.5	5.5±1.2	6.1±1.6	
Jordan Fett ¹⁷ 2017	Intranasal dexmedetomidine	Oral chloral hydrate	44	49	20/2 4	21/28	16.2± 7.5	11.1± 5.2	9.7±2.3	8.3±1.6	A randomised controlled trial
VMY Yuen ¹⁸ 2017	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 50mg/kg	87	107	-	-	-	-	-	-	double-blinded, randomised controlled trial
Bi L. Li ¹⁹ 2018	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 50mg/kg	78	82	52/2 6	59/23	31 21-48	31 22-55	13 10-16	12.8 10-16	A randomized controlled trial
Eun-Young	Intranasal dexmedetomidine	Oral chloral hydrate	118	118	73/4	77/41	97±	87.4±	28±	26.3±	A randomized

Joo ²⁰ 2020	3µg/kg	50mg/kg			5		41.8	43.9	14.2	14.8	controlled trial
Li Bi-lian ²¹ 2013	Intranasal dexmedetomidine 1µg/kg	Oral chloral hydrate 50mg/kg	109	107	65/4 4	70/37	24.5± 15.85	23.9± 18.7	10.98± 3.43	11.02± 4.1	A randomized controlled trial
	Intranasal dexmedetomidine 1.5µg/kg	Oral chloral hydrate 50mg/kg	95	107	63/3 2	70/37	27.39± 16.75	23.9± 18.7	11.68± 3.2	11.02± 4.1	
	Intranasal dexmedetomidine 2µg/kg	Oral chloral hydrate 50mg/kg	99	107	59/4 0	70/37	25.94± 15.55	23.9± 18.7	11.22± 3.22	11.02± 4.1	
	Intranasal dexmedetomidine 2.5µg/kg	Oral chloral hydrate 50mg/kg	92	107	60/3 2	70/37	25.53± 17.05	23.9± 18.7	10.95± 3.5	11.02± 4.1	
	Intranasal dexmedetomidine 3µg/kg	Oral chloral hydrate 50mg/kg	99	107	57/4 2	70/37	25.43± 16.73	23.9± 18.7	11.24± 3.32	11.02± 4.1	
	Ma Lei ²² 2020	Intranasal dexmedetomidine 1.5µg/kg	Oral chloral hydrate 50mg/kg	24	23	-	-	66± 34.8	61.1± 33.6	22.9± 7.4	
Zhang Xu-feng ²³ 2019	Intranasal dexmedetomidine 2µg/kg	Oral chloral hydrate 30~50mg/kg	619	289	-	-	-	-	-	-	A randomized controlled trial
Ji Xiang-hua ²⁴	Intranasal dexmedetomidine	Oral chloral hydrate	50	50	20/3	21/29	15.72±	16.08±	13.11±	13.12±	A randomized

2018	2µg/kg	100mg/kg			0		8.88	11.16	6.5	7.23	controlled trial
------	--------	----------	--	--	---	--	------	-------	-----	------	------------------

DXM: dexmedetomidine; CH: chloral hydrate.