Supplementary Table 1

Literature Search Strategy for Eight Databases (PubMed, Cochrane Library, Web of Science, Embase, VIP, WanFang, CNKI and CBM)

Database | Search Platform | Key Words / MeSH Terms | Boolean Logic | Hits | Notes.

(1)PubMed

#1 "Hemorrhoids"[Mesh]

#2 (Hemorrhoids[Title/Abstract]) OR (Hemorrhoid[Title/Abstract])

#3 #1 OR #2

#4 "Sclerotherapy"[Mesh]

#5 (((Sclerotherapy[Title/Abstract]) OR (Sclerotherapies[Title/Abstract])) OR (lauromacrogol[Title/Abstract])) OR (Xiaozhiling[Title/Abstract])

#6 #4 OR #5

#7"Colonoscopy"[Mesh]

#8((((((((((Colonoscopy[Title/Abstract]) OR (Colonoscopies[Title/Abstract])) OR (Colonoscopic Surgical Procedures[Title/Abstract])) OR (Colonoscopic Surgical Procedure[Title/Abstract])) OR (Procedure, Colonoscopic Surgical[Title/Abstract])) OR (Procedures, Colonoscopic Surgical[Title/Abstract])) OR (Surgical Procedure, Colonoscopic[Title/Abstract])) OR (Colonoscopic Surgery[Title/Abstract])) OR (Colonoscopic Surgeries[Title/Abstract])) OR (Surgeries, Colonoscopic[Title/Abstract])) OR (Surgery, Colonoscopic[Title/Abstract])) OR (Surgical Procedures, Colonoscopic[Title/Abstract])

#9 #7 OR #8

#10 #3 AND #6 AND #9

(2)Cochrane Library

#1 MeSH descriptor: [Hemorrhoids] explode all trees

#2 (Hemorrhoid).ti,ab.kw

#3 #1 OR #2

#4 MeSH descriptor: [Sclerotherapy] explode all trees

#5(Sclerotherapies):ti,ab,kw OR (lauromacrogol):ti,ab,kw OR (Xiaozhiling):ti.ab.kw

#6 #4 OR #5

#7 MeSH descriptor: [Colonoscopy] explode all trees

#8 (Colonoscopies)ti ab,ky OR (Colonoscopic Suraical Procedures):ti.ab.kw OR (Colonoscopic SuraicaProcedure)ti.ab.kw oR(Procedure.colonoscopicSurgical:t.ab,kw OR (Procedures, Colonoscopic Surgical;t, ab.kaw OR (Surgical Procedure, Colonoscopic):ti.ab,.kw OR (colonoscopic Surgery).t.ab kw OR(Colonoscopic Surgeries)tl.ab,kw OR (Surgeries, Colonoscopic;., ab.kw OR (Surger, Colonoscopic);ti ab.kw OR (Surgical Procedures, colonoscopic.ti.ab kw

#9 #7 OR #8

#10 #3 AND #6 AND #9

(3)WOS

#1 "Hemorrhoids (Topic) OR Hemorrhoid (Topic)"

#2 "Sclerotherapy (Topic) OR Sclerotherapies (Topic) OR sclerosing injection therapy (Topic) OR lauromacrogol (Topic) OR Xiaozhiling (Topic) "

#3 "Colonoscopy (Topic) OR Colonoscopies (Topic) OR colonscopy (Topic) OR coloscopy (Topic) OR fiber colonoscopy (Topic) OR colonoscopy (Topic) "
#4 #1 AND #2 AND #3

(4)Embase
#1 'hemorrhoid'/exp
#2 hemorrhoids:ti,ab,kw OR hemorrhoid:ti,ab,kw
#3 #1 OR #2
#4 'sclerotherapy'/exp
#5 sclerotherapy:ti,ab,kw OR sclerotherapies:ti,ab,kw OR lauromacrogol:ti,ab,kw OR xiaozhiling:ti,ab,kw OR 'sclerosing injection therapy':ti,ab,kw
#6 #4 OR #5
#7 'colonoscopy'/exp
#8 colonoscopies:ti,ab,kw OR colonscopy:ti,ab,kw OR coloscopy:ti,ab,kw OR 'fiber colonoscopy':ti,ab,kw OR colonoscopy:ti,ab,kw
#9 #7 OR #8
#10 #3 AND #6 AND #9

VIP Database
(ANY=hemorrhoid*+internal-hemorrhoid*+piles+anal-pile*)
AND
(ANY=sclerotherap*+lauromacrogol+polidocanol+"sodium tetradecyl sulfate"+"foam sclerotherap"+xiaozhiling)
AND
(ANY=colonoscop+endoscop*+sigmoidoscop*)

WanFang Data
ALL:(hemorrhoid* OR internal-hemorrhoid* OR piles OR anal-pile*)
AND
ALL:(sclerotherap* OR lauromacrogol OR polidocanol OR "sodium tetradecyl sulfate" OR "foam sclerotherap*" OR xiaozhiling)
AND
ALL:(colonoscop* OR endoscop* OR sigmoidoscop*)

(7) CNKI
SU=hemorrhoid*+internal-hemorrhoid*+piles+anal-pile*
AND
SU=sclerotherap*+lauromacrogol+polidocanol+"sodium tetradecyl sulfate"+"foam sclerotherap*"+xiaozhiling
AND
SU=colonoscop*+endoscop*+sigmoidoscop*
(8) CBM (Sinomed)
#1 "Hemorrhoids"[Unweighted] OR hemorrhoid* OR internal-hemorrhoid* OR piles OR anal-pile*

#2 "Sclerotherapy"[Unweighted] OR sclerotherap* OR lauromacrogol OR polidocanol OR "sodium tetradecyl sulfate" OR "foam sclerotherap*" OR xiaozhiling
#3 "Colonoscopy"[Unweighted] OR colonoscop* OR endoscop* OR sigmoidoscop*
#4 #1 AND #2 AND #3

Supplementary Table 2 **Characteristics of included trials in this meta-analysis**

Study	Country	Grade	Group	ES/TS（n）	Sex(F/M)	Age(ES/TS) yr	Type of surgery	Combined anal disorders(Y/NR)
Liu 2015[21]	China	II, III	ES	86	58/76[a]	48.9±14.6	ES	NR
			TS	48		47.1±15.2	Ferguson	
Li 2019[15]	China	I-III	ES	30	25/35[a]	41.21±4.31	ES	NR
			TS	30		40.14±3.13	TS	
Xia 2019[23]	China	-	ES	53	47/59[a]	40.82±3.81	ES	NR
			TS	53		40.82±2.91	TS	
Ke 2020[16]	China	II, III	ES	58	61/55[a]	42.3±2.20	ES	NR
			TS	58		42.1±2.1	Ferguson	
Li 2020[17]	China	I- III	ES	30	13/47[a]	34.85±3.24	ES	Y
			TS	30		35.25±3.34	TS	
Ding 2021[18]	China	I-IV	ES	30	32/28[a]	43.1±12.1	ES	Y
			TS	30		42.2 ±11.7	PPH	
Lin[1] 2021[19]	China	I-III	ES	40	28/52[a]	37.91±4.87	ES	NR
			TS	40		38.11±4.99	TS	
Wang2021[20]	China	I- III	ES	30	29/31[a]	38.1±1.89	ES	NR
			TS	30		39.9±1.75	TS	
Lv 2021[22]	China	I- III	ES	40	31/49[a]	42.8±5.1	ES	Y
			TS	40		44.5±4.8	TS	
Chen 2021[24]	China	II, III	ES	40	34/46[a]	43.37±15.13	ES	NR
			TS	40		43.51±15.27	Ferguson	
Lin[2] 2021[25]	China	I- III	ES	30	21/39[a]	46.3±2.5	ES	NR
			TS	30		45.9±2.3	PPH	
Zhou 2021[26]	China	I- III	ES	69	72/63[a]	54.1±8.2	ES	Y
			TS	66		51.2±7.6	RPH	
Chen 2023[29]	China	II, III	ES	60	49/71[a]	46.01±9.98	ES	NR
			TS	60		45.36±10.15	PPH	
Yu 2023[30]	China	I-III	ES	60	49/71[a]	46.19±12.91	ES	Y
			TS	60		41.95±15.39	TS	
Wang2023[31]	China	II, III	ES	122	121/123[a]	52.7±4.3	ES	Y
			TS	122		54.6±2.4	PPH	
Wu 2024[32]	China	-	ES	52	39/65[a]	47.08±4.25	ES	NR
			TS	52		46.59±4.28	TS	
Zheng2024[33]	China	I-III	ES	35	27/43[a]	47.92±5.6	ES	Y
			TS	35		47.65±5.4	TS	

Supplementary Fig. S1 Funnel plot of the included studies for the primary outcome (clinical efficacy).

RR: risk ratio; SE: standard error.