

Supplementary material

Supplementary Table 1 Embase search strategy

No.	Query	Results
1.	polypectom* OR postpolypectom* OR 'post polypectom*' OR 'endoscopic polypectomy'/exp OR 'polypectomy'/exp OR 'intestine polyp'/exp/dm_su OR 'intestine carcinoma'/exp/dm_su	30955
2.	(hemoclip* OR 'blood vessel clip*' OR 'vascular closure clip*' OR anastoclip OR atraucip OR duraclipor) AND haemoclip OR 'haemostasis clip' OR 'haemostatic clip' OR hemaclip OR 'hemostasis clip' OR 'hemostatic clip' OR sureclip OR 'vascular clip' OR 'vein clip' OR 'vessel clip' OR (hemosta* AND clip*) OR 'blood vessel clip'/exp	4265
3.	'postoperative bleed*' OR 'postoperative blood loss' OR 'postoperative haemorrhage' OR 'postoperative haemorrhagia*' OR 'postoperative hemorrhage' OR 'postoperative hemorrhagia*' OR bleed* OR hemostat* OR 'postoperative hemorrhage'/exp OR 'gastrointestinal hemorrhage'/exp	621298
4.	#1 AND #2 AND #3	308
5.	#4 NOT ('editorial'/it OR 'review'/it OR 'short survey'/it)	269
6.	#5 NOT ('animal experiment'/de OR 'animal model'/de OR 'animal tissue'/de OR 'case report'/de OR 'case study'/de OR 'meta analysis'/de OR 'nonhuman'/de OR 'porcine model'/de OR 'practice guideline'/de OR 'systematic review'/de)	188

Supplementary Table 2 Definition of variables across studies

Variables	Albeniz [20]	Feagins [4]	Kouklakis [21]	Pohl [7]	Zhang [12]	Osada [22]
Polypectomy	Injection-assisted EMR was performed	Injection-assisted EMR was performed	In group A, injection-assisted EMR was performed. In group B snaring followed by EMR was performed. Smaller polyps were removed with conventional snare polypectomy.	Injection-assisted EMR was performed	Injection followed by EMR. If the lesion exceeded 2.0 cm, conventional EMR with circumferential incision or ESD was used.	Injection-assisted EMR was performed with circumferential incision
Clip closure	Defined as complete closure, partial closure and failed closure	Defined as either complete closure with hemoclips or if the defect could only be partially closed	Complete closure of mucosal defect	Complete closure of mucosal defect	The whole resection site was closed completely with clips and sutures	Mucosal defects post-ESD were closed completely using clips
Bleeding	Defined as clinically evident bleeding that required medical attention within 15 days after the colonoscopy	Defined as the occurrence of delayed PPB (rectal bleeding within 30 days after polypectomy)	Bleeding was defined as bleeding occurring between 24 h and 30 days after polypectomy presenting as hematochezia	Defined as a severe bleeding event after the patient left the endoscopy unit and within 30 days after completion of the colonoscopy	DPPB was defined as bleeding that resulted in overt hematochezia 6 hours to 30 days after EMR or ESD	Defined as overt rectal bleeding that occurred during 4 weeks post-ESD
Post-polypectomy syndrome	Defined by symptoms of pain, fever, leukocytosis, peritoneal tenderness, and guarding			Defined by symptoms of pain, fever, leukocytosis, peritoneal tenderness, and guarding	Defined by symptoms of pain, fever, leukocytosis, peritoneal tenderness, and guarding	
Post-procedure pain	Pain was considered when a patient required pharmacologic treatment or medical attention	Subjective	Subjective based on the patient follow ups at outpatient department	Subjective	Subjective	Subjective

EMR, endoscopic mucosal resection; ESD, endoscopic submucosal dissection; PPB, post-polypectomy bleeding

Supplementary Table 3 Risk of bias included in randomized controlled trials

Study	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Selective reporting (reporting bias)	Other bias
Albeniz	Low	Low	High	High	Low	Low
Feagins	Low	Low	High	High	Low	Low
Kouklakis	Low	Unclear	High	Low	Unclear	Low
Pohl	Low	Low	High	High	Low	Low
Zhang	Low	Low	High	Low	Low	Low
Osada	Unclear	Low	High	Low	Low	Low

Supplementary Table 4 Summary of findings

Outcomes	Anticipated absolute Effects* (95%CI)		Relative effect (95%CI)	Number of participants (studies)	Certainty of the evidence (GRADE)
	Risk with Standard group	Risk with Hemoclip group			
Delayed post-polypectomy bleeding (>10 mm)	56 per 1000	29 per 1,000 (19-42)	RR 0.513 (0.348-0.757)	2703 (6 RCTs)	⊕⊕⊕⊕ HIGH
Delayed post-polypectomy bleeding (>20 mm)	81 per 1000	64 per 1,000 (6-670)	RR 0.792 (0.076-8.239)	1227 (4 RCTs)	⊕⊕⊕⊕ HIGH
Post-polypectomy syndrome	12 per 1000	11 per 1,000 (0-41)	RR 1.020 (0.991-1.051)	1513 (3 RCTs)	⊕⊕⊕○ MODERATE
Pain	42 per 1,000	25 per 1,000 (4-150)	RR 0.605 (0.102-3.601)	1577 (4 RCTs)	⊕⊕⊕○ MODERATE
Perforation	6 per 1,000	4 per 1,000 (1-12)	RR 0.681 (0.240-1.932)	2646 (5 RCTs)	⊕⊕⊕⊕ HIGH

*The risk in the intervention group (and its 95%CI) is based on the assumed risk in the comparison group and the relative effect of the intervention (and its 95%CI)
CI, confidence interval, RR risk ratio; RCT, randomized controlled trial

Supplementary Table 5 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