

Prospective analysis of delayed colonic post-polypectomy bleeding

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Backgrounds/Aims: Although post-polypectomy bleeding is the most frequent complication after colonoscopic polypectomy, there are few studies which investigate incidence of bleeding prospectively. The aim of this study was to prospectively investigate the incidence of delayed post-polypectomy bleeding and its associated risk factors. **Methods:** Patients who underwent colonoscopic polypectomy at the Kangbuk Samsung Hospital from January 2013 to December 2014 were prospectively enrolled in this study. Trained nurses contacted patients by telephone at 7 and 30 days after the polypectomy and completed a standardized questionnaire that asked about the development of bleeding. Post-polypectomy bleeding was characterized as either minor or major (a > 2 g/dl drop in hemoglobin, requirement for hospitalization for control of bleeding, or transfusion) by the amount of bleeding as well as late delayed (i.e., bleeding after 24 hours) by the time of bleeding. **Results:** A total of 8,175 colonoscopic polypectomies were performed in 3887 patients. Overall, 133 (3.4%) patients developed post-polypectomy bleeding. Among them, 90 (2.3%) and 43 (1.1%) patients developed minor and major bleeding, respectively, and 39 (1.0%) patients developed late delayed bleeding. According to by-polyp-based multivariate analysis, young age (< 50 years; odds ratio [OR]: 2.10; 95% confidence interval [CI]: 1.18-3.68), aspirin use (OR: 2.78; 95% CI: 1.23-6.31) and polyp size > 10mm (OR: 2.45; 95% CI: 1.38-4.36) were significant risk factors for major bleeding, while young age (OR: 2.6; 95% CI: 1.35-5.12) and immediate bleeding (OR: 3.3; 95% CI: 1.49-7.30) were significant risk factors for late delayed bleeding. **Conclusions:** Young age, aspirin use, polyp size and immediate bleeding were found to be independent risk factors for delayed post-polypectomy bleeding.

	Non-bleeding patients (n=3,754)	Bleeding patients (n=133)	p value	
Age	55.8(11.9)	52.4(12.3)	0.002	
Male sex	2557(68.1)	104(78.2)	0.01	
Comorbidity				
HTN	874(23.3)	29(21.8)	0.69	
DM	367(9.8)	8(6.0)	0.15	
Chronic liver disease	37(1.0)	1(0.8)	0.78	
Chronic renal disease	23(0.6)	0(0)	0.36	
Current drug use				
Antiplatelet	139(3.6)	17(12.6)	0.99	
Anticoagulant	15(0.4)	0(0)	0.46	
Procedure related factors				
Trained participants	1396(37.2)	51(38.3)	0.89	
Polyp-related factor				
Polyp number > 3	1154(30.7)	53(39.8)	0.03	
Size > 10 mm	1333(35.5)	67(50.4)	<0.001	
Location			0.04	
Right	1371(36.6)	40(30.1)		
Left	1371(36.5)	44(33.1)		
Both	1010(26.9)	49(36.8)		
	Controls (n=8,175)	Major bleeding cases (n=98)	p value	
Procedure related factors				
Trained participants	3558(43.8)	29(30.0)	0.34	
Method of polypectomy			0.40	
Piecemeal	310(3.8)	1(1.7)		
En block	7807(96.2)	57(58.3)		
Immediate bleeding control	663(8.2)	5(8.6)	0.90	
Polyp-related factor				
Propylactic procedure	713(8.8)	7(12.1)	0.37	
Size > 10 mm	1730(21.3)	22(37.9)	0.002	
Location, right	4077(50.2)	31(53.4)	0.62	
Morphology			0.04	
Is	5056(62.5)	28(48.3)		
Isp	1974(24.3)	23(39.7)		
Ipl	580(7.1)	5(8.6)		
LSI	487(6.0)	2(3.4)		
	Controls (n=8135)	Late delayed bleeding cases (n=40)	p value	
Procedure related factors				
Trained participants	3570(43.9)	17(42.5)	0.86	
Method of polypectomy				
Piecemeal	311(3.8)	0		
En block	7824(96.2)	40(100)		
Immediate bleeding control	659(8.1)	9(22.5)	0.001	
Propylactic procedure	713(8.8)	7(17.5)	0.05	
Polyp-related factor				
Size > 10mm	1763(21.4)	14(35.0)	0.03	
Location, right	4093(50.2)	25(62.5)	0.12	
Morphology			0.17	
Is	5085(62.5)	19(47.5)		
Isp	1983(24.4)	14(35)		
Ipl	580(7.1)	5(12.5)		
LSI	487(6.0)	2(5.0)		
Patient related factor	Major bleeding		Late delay of bleeding	
	OR	95% CI	OR	95% CI
Male sex (vs. female)	1.75	0.88-3.49	1.24	0.58-2.65
Age < 50 (vs. > 50)	2.10	1.18-3.68	2.6	1.35-5.12
Diabetes mellitus (yes vs. no)	0.40	0.12-1.32	0.57	0.13-2.47
Hypertension (yes vs. no)	0.93	0.45-1.88	0.94	0.38-2.29
Chronic renal disease (yes vs. no)	0		0	
Chronic liver disease (yes vs. no)	3.34	0.44-25.17	3.06	0.4-23.4
Aspirin (yes vs. no)	2.78	1.23-6.31	0.35	0.04-2.78
Anticoagulant (yes vs. no)	0		0	
Procedure related factor				
Trained participation (vs. experienced)	1.71	0.71-2.05	0.75	0.30-1.47
Method of polypectomy, piecemeal (vs. en block)	0.31	0.04-2.33	0	
Immediate bleeding (yes vs. no)	0.86	0.33-2.23	3.3	1.49-7.30
Propylactic procedure (yes vs. no)	1.14	0.50-2.59	2.27	0.95-5.39
Polyp related factor				
Polyp size > 10 mm (vs. < 10mm)	2.45	1.38-4.36	1.45	0.70-2.98
Polyp location, right (vs. left)	1.21	0.71-2.04	1.81	0.95-3.47
Polyp morphology, Isp, Ipl, and LSI (vs. others)	0.77	0.29-2.02	1.27	0.46-3.50

A case of acute esophageal necrosis

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Introduction: Acute esophageal necrosis (AEN), also known as 'black esophagus', is a rare clinical disease characterized by black pigmentation of the distal esophageal mucosa. Gastrointestinal bleeding is the most frequent clinical manifestation. Although the etiology of AEN is unclear, it is likely multifactorial, arising from an ischemic insult, impaired local defense mucosal barrier systems and backflow injury from gastric contents. Here, we report a rare case of black esophagus. **Case report:** A 68-year-old woman undergoing chemotherapy for ovary cancer was brought to the emergency room with several episodes of hematemesis. Esophagogastroduodenoscopy (EGD) revealed typical findings of acute esophageal necrosis (AEN) with thick black stripes involving the low esophagus, with a sharp demarcation at the squamocolumnar border. Treatment with intravenous fluids and a proton pump inhibitor was initiated, and his gastrointestinal symptoms and hematemesis also resolved. On day 4 of hospitalization, black stripes were less prominent on follow-up EGD. **Key words:** acute esophageal necrosis