

### The Significance of Preoperative Stoma Site Marking

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**Purpose :** The complication after colostomy for natio place undue hardship and emotional trauma on the o mates. The purpose of this study was to find the of preoperative stoma site marking on postoperative related complication.

**Methods :** We recruited 127 colostomy patients w underwent sigmoid or descending end colostomy, by e tive operation. Transverse colostomy, loop colostom emergency operation were excluded in this study. divided the patients into two groups according t operative stoma site marking by an enterostomal ther Postoperative stoma related complications were comp and analysed prospectively using chi-square test an t-test. Significance was assigned to a P value of

**Results :** Among 127 patients, 49 were marked preop atively (marking group) while 78 were not marked ( marking group). Overall stoma related complications developed in 32 (25%) cases. Mjor complications inc prolapse, parastomal hernia, stenosis were develop (8%) cases and minor complications including peri dermatitis and wound infection were developed in (17%) cases. Stoma related complications were devel in 7 (14%) cases in the marking group and 25 (32%) ca in the non-marking group (P<0.05). Mjor complica were developed in 2 (4%) cases in the marking group 8 (10%) cases in the non-marking group. Mnor co plications were developed in 5 (10%) cases in the na group and 17 (22%) cases in the non-marking gro However, the difference in najor and minor complica between the groups was not statistically signifi minor complications in the non-marking group, 9 (

cases due solely to postoperative frequent stool leakage caused by inappropriate location of the stoma. However, in the marking group, postoperative stool leakage was not observed.

**Conclusions :** Preoperative stoma site marking by an ostomal therapist may reduce postoperative stoma re complication. All elective procedure that result formation should be assessed and marked preoperati  
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**Key Words :** Stoma complication, Stoma site marking

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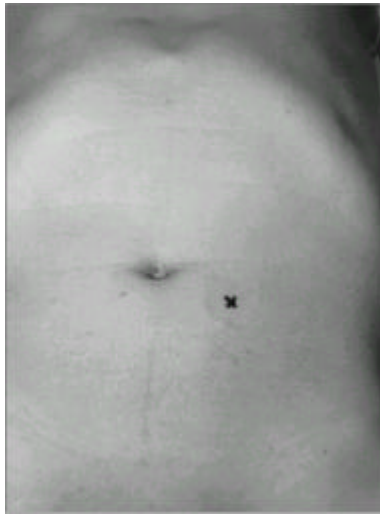
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**Fig. 1.** Preoperative stoma site marking. Using indelible pen, mark preferred stoma site with "X". Cover mark with transparent film dressing and prevents removal with washing or during preoperative skin preparation.

**Table 1.** Patients' characteristics

	Marking group (n=49)	Non-marking group (n=78)
Mean age (range, year)	57 (30-79)	57 (18-79)
Sex ratio (M:F)	1.6 : 1 (30 : 19)	1.7 : 1 (49 : 29)
Surgery performed		
Abdominoperineal resection	44 (89%)	75 (96%)
Hartmann's operation	5 (11%)	3 (4%)

**Table 2.** Underlying diseases of ostomates

	Marking group (%)	Non-marking group (%)
Malignancy	46 (94)	77 (99)
Rectal cancer	43 (88)	73 (94)
Anal cancer	2 (4)	0
Recurred ovarian cancer	1 (2)	0
Rectal GIST*	0	2 (3)
Rectal melanoma	0	1 (1)
Pelvic rhabdomyosarcoma	0	1 (1)
Benign	3 (6)	1 (1)
Rectal stricture	2 (4)	0
Perirectal abscess	1 (2)	1 (1)
Total	49	78

\*GIST = gastrointestinal stromal tumor

127 (57%) vs 79 (48%) (P=0.024).  
 11 (25%) vs 2 (3%) (P=0.001).  
 (88%) vs 2 (4%) (P=0.001).  
 18 (37%) vs 2 (4%) (P=0.001).  
 2 (4%) vs 1 (2%) (P=0.001).  
 127 (57%) vs 79 (48%) (P=0.024).  
 11 (25%) vs 2 (3%) (P=0.001).  
 (88%) vs 2 (4%) (P=0.001).  
 18 (37%) vs 2 (4%) (P=0.001).  
 2 (4%) vs 1 (2%) (P=0.001).

73 (94%), 2 (3%), 1 (1%) (Table 2).  
 32 (25%) vs 10 (8%) (P=0.001).  
 22 (17%) vs 7 (14%) (P=0.024).  
 25 (32%) vs 1 (2%) (P=0.001).  
 43 (6%), 2 (3%), 1 (1%) (Table 2).



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가 가

3,6,19,21

가

가 가  
가

3,6

11 69% (Table 3).<sup>10-12,15-18</sup>

10-13,15-21

가

가

6,19,21

10-12,19-21

19-22

6 (8%)가  
가

가  
(Fig. 3A).

가

10

13,22,23

37 60%

가

19-21

가

19-21,24-26

3

Table 3. Collected series of colostomy complication

Author	Year	No. of colostomies	Complication rate (%)
Birnhaum <sup>15</sup>	1952	569	29.5
Green <sup>18</sup>	1966	318	21.7
Burn <sup>16</sup>	1970	307	17.0
Saha <sup>17</sup>	1973	200	11.0
Porter <sup>10</sup>	1989	130	44.0
Cheung <sup>12</sup>	1995	189	69.0
Yu <sup>11</sup>	1996	146	15.1
Park <sup>2</sup>	1999	1188	29.0

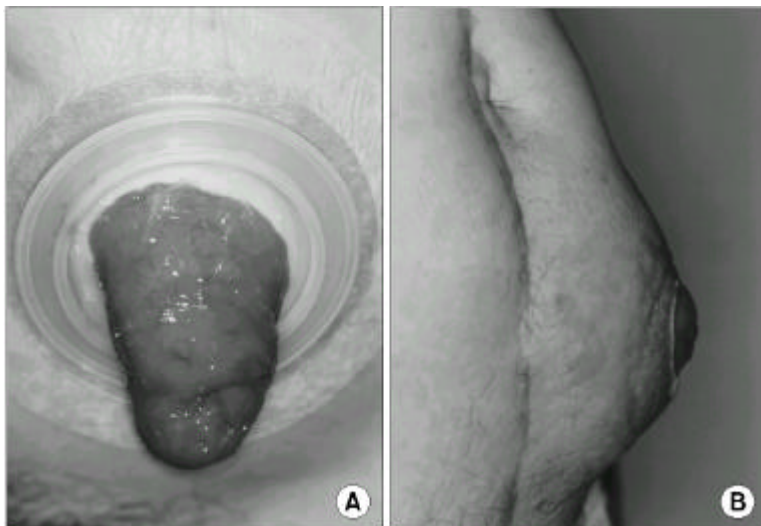


Fig. 3. Colostomy complications. (A) Prolapsed stoma, (B) Parastomal hernia.

(Fig. 3B).

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1 (1%)	가	Porter	13.5%, 4.8%
17%	가		
10	가		
11	가		
6, 19-21	가	12 (17%)	10
	가	4 (40%)	
	가	10 (15%)	7
	가		가
	가	Bass	1
60%	가		

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