(SSADR), and to date the association between ADR and SSADR has not also been investigated. Aim: To assess the association between SSADR and ADR. Method: This is a retrospective single-center analysis. From our medical records, we have extracted a total of 4677 consecutive cases of total colonoscopy (TCS) performed by gastroenterologists in our institute between January and December in 2014. After excluding overlapped cases (i.e. repeated examinations), a total of 3732 cases of TCS were enrolled in this study. We investigated the number of resected low grade adenoma, high grade adenoma, cancer, SSA/P, and SSA/P with cytological dysplasia. Neoplasms which were resected but not histologically evaluated, and endoscopically detected neoplasms which were not resected for various reasons were excluded. We checked the incidence of resection of low grade adenoma, high grade adenoma or cancer in all examinees, and calculated the ADR for each endoscopist. In the same way, we calculated the SSADR for each endoscopist based on the incidence of resected SSA/P and SSA/P with cytological dysplasia. Using each endoscopist's ADR and SSADR, we assessed the correlation between ADR and SSADR weighted by the number of each endoscopist's examinations. Results: Out of the 3732 cases, cancer was detected in 94 cases (2.5%), high grade adenoma in 65 (1.7%), low grade adenoma in 1033 (27.7%), SSA/P in 83 (2.2%), and SSA/P with cytological dysplasia in 4 (0.1%). The number of endoscopists involved in this study was 35. There was no significant difference in the age and gender of examinees for each endoscopist. The mean ADR and SSADR were 32.7 % (± 10.5), 2.9 % (± 3.7), respectively. As for the correlation between ADR and SSADR, these two factors were significantly correlated (correlation coefficient: 0.5399, $P = 0.0008$). Conclusion: The present study demonstrated that there was significant correlation between ADR and SSADR. This result implies that efforts to improve ADR lead to high SSADR.
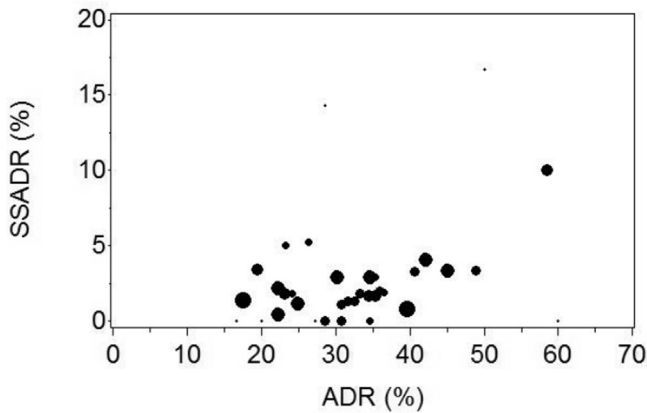
The scatter diagram of ADR and SSADR weighted by the number of each endoscopist's examinations

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Higher Adenoma Detection Rate With Endocuff: A Randomized Controlled Trial

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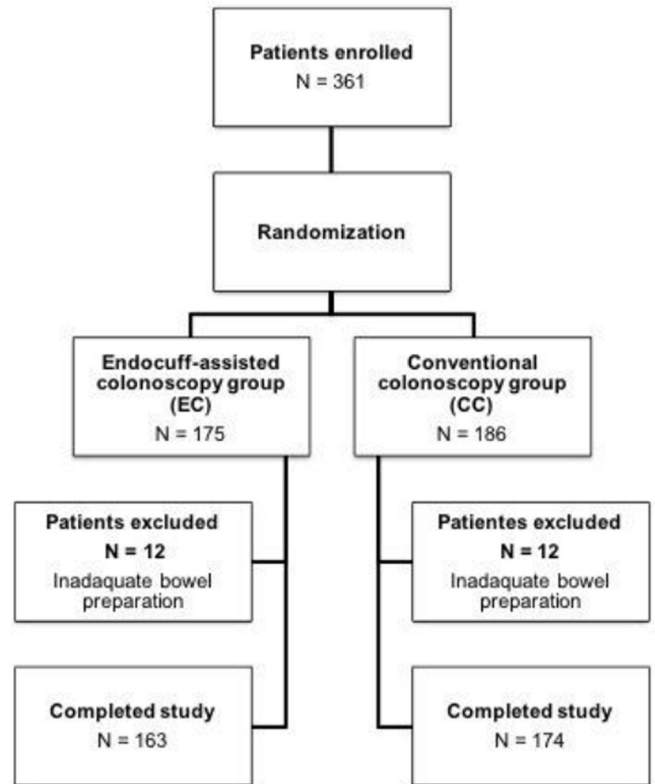
Background: Colorectal cancer (CRC) is one of the leading causes of death worldwide. Many techniques have been implemented to improve the vision of the endoscopist in order to attempt a greater detection of adenomas. The "endocuff" (EC) is a polymer sleeve cap which joins the tip of the colonoscope in order to improve the image display of the mucosa during colonoscopy procedure. Aim: To compare the adenoma detection rate (ADR) with the EC cap compared to conventional colonoscopy (CC). Methods: This is a randomized clinical trial that was conducted at a single tertiary care center. From April 2014 thru November 2015 patients with CRC screening were included. We prospectively enrolled 337 patients [248 females, mean age 61 years (IQR 55-68)]. Enrollment flow chart is seen in Figure 1. Patients were randomized into two groups: endocuff-assisted colonoscopy group (EC group) and conventional colonoscopy without endocuff (CC group). ADR was defined as the proportion of screening colonoscopies with histopathological diagnosis of at least one adenoma or carcinoma. Polyp detection rate (PDR) was defined as the proportion of screening colonoscopies with histopathological diagnosis of at least one polyp. Descriptive statistics were used for demographic characteristics. Continuous variables were analyzed using Student's t test or Wilcoxon rank-sum-Mann Whitney. For categorical variables we used the chi-squared test. A p value less than 0.05 was considered statistically significant. Results: There was a higher ADR in patients of the EC group compared with patients in the CC group (22.4% vs 13.4%, p = 0.034). The polyp detection rate (PDR) was higher in the EC group compared with the CC group (29.9% vs 15.9%, p =0.002). Adenoma and polyp analysis in shown in Table 1. Significantly more polyps between the size of 5 mm and 1 cm were detected in the EC group (45.4% vs 31.6%, p=0.037) as well as more flat polyps (16.7% vs 7.9%, p 0.039). Patients in the EC group had a significantly higher right colon polyp detection rate (35.5% vs 30.1%, p = 0.006). There were no statistical differences between the two groups in terms of age, gender, colonoscope used, quality of bowel preparation according to the Boston Bowel Preparation Scale (BBPS) and time of withdrawal. The cecal intubation time decreased significantly in the EC group compared to the CC group (10 minutes vs 12 minutes, p = 0.002). However, the rate of ileal intubation was statistically lower in the EC group (75% vs 92%, p = <0.001). In the majority of colonoscopies, no adverse events occurred in either group. Conclusions: According with our data, the EC increased the ADR by 67%. The EC is useful tool for adenoma detection rate that is safe, effective, and easy to use.

Trial Registration: ClinicalTrials.gov NCT02387593

Polyp and adenoma detection rate analysis

Variable	EC group n=174	CC group n=163	p Value
Polyp detection rate (PDR), n (%)	52 (29.9)	26 (15.9)	0.002
Total number of polyps, n (%)	127 (100)	83 (100)	0.006
Right colon	45 (35.5)	25 (30.1)	0.017
Transverse colon	33 (25.9)	11 (13.2)	0.009
Left colon	49 (38.6)	47 (56.7)	0.891
Adenoma detection rate (ADR), n (%)	39 (22.4)	22 (13.4)	0.034
Total number of adenomas, n (%)	53 (100)	35 (100)	0.034
Cecum	4 (7.5)	4 (11.4)	0.926
Right colon	16 (30.2)	11 (31.5)	0.408
Transverse colon	15 (28.4)	7 (20)	0.108
Left colon	14 (26.4)	9 (25.7)	0.358
Rectum	4 (7.5)	4 (11.4)	0.926

Enrollment flow chart