

中文題目：比較 Endocuff 和傳統的大腸鏡對於息肉的偵測

英文題目：Comparison of Endocuff™ and conventional colonoscopy for colon polyp detection in screening or surveillance colonoscopy

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Background:

Colon adenoma detection is one of the most quality indicators for colonoscopy. Its detection with subsequent removal can reduce the incidence of colorectal cancer. There are many diagnostic aids equipment intending to improve adenoma detection.

A special design cuff (Endocuff™) with transverse projection arms which can attach at the tip of the colonoscopy is developed recently. Its use while withdrawing can flatten the folds and detect more polyps.

Methods :

The primary outcome is to compare the adenoma detection rate (ADR) between Endocuff and standard colonoscopy (EC vs SC) at screening or surveillance colonoscopy. The secondary outcomes are to see the difference of cecal intubation, all polyp detection rate (PDR), withdrawal time and complication.

We prospectively randomized the indicated colonoscopies into EC or SC according to physician's discretion. Patients with previous colon surgery, inflammatory bowel disease, acute colitis or suspect ileus were excluded. All the cases were sedated with propofol-based medications. Most patients use picosulfate plus magnesium citrate (PS/MC) for colon preparation. Both Aronchick and Boston Bowel Preparation Scale (BBPS) were used to evaluate colon preparation. Cecal intubation time and rate, polyps and adenomas detected (with number, size, and location), withdrawal time for those without procedure, and complication were recorded. All the colonoscopists are well experienced with individual ADR not inferior to the national average data.

Results:

There are 408 cases in EC group and 399 in SC with an average age of 56.1 vs 56.7 (p=0.384). Female ratio was 55.9% vs 61.2% (p=0.129). Previous history of abdominal surgery was 40.9% vs 59.1% (p=0.699). Cecal intubation was accomplished in all cases. Mean cecal intubation time was 250.5 vs 272.3 seconds (p=0.586). Mean withdrawal time for those without any procedure

(178 vs 198 in cases) was 294.8 vs 239.5 seconds ($p=0.203$). Bowel cleansing with PS/MC was 97.3% vs 97.3% ($p=0.149$). The Aronchick scale for excellent and good was 4.2%, 80.9% vs 3.5%, 83.5% respectively ($p=0.634$). Mean BBPS score was 7.36 vs 7.31 ($p=0.385$). PDR was 47.6% vs 39.6% ($p=0.023$). Mean polyp per procedure (MPP) was 0.97 vs 0.73 ($p<0.0001$). ADR was 32.1% vs 25.8% ($p=0.049$). Mean adenoma per procedure (MAP) was 0.62 vs 0.49 ($p=0.081$). Number of advanced polyp was 29 vs 40 ($p=0.219$). Only few mucosal scratching but no cuff dislocation or termination of the procedure was noted in EC group.

Subgroup analysis for those over the 50 years old without positive FIT revealed that ADR was statistically significant for EC group (33.2% vs 29.4%, $p=0.038$). For those between 40 and 49 years old, there was no significant difference in PDR or ADR between two groups.

Discussion:

Endocuff is safe for colonoscopy with minimal adverse event. It does not interfere with cecal intubation. PDR and ADR are better for EC groups with statistically significant. MPP was also statistically significant but MAP was not. Both are limited to diminutive and small polyps. Benefit for advanced and sessile serrated polyp detection or interval cancer incidence await further study.