

Study Summary

Effect of Endocuff-Assisted Colonoscopy on Adenoma Detection Rate: Meta-analysis of Randomized Controlled Trials

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Conclusion

Endocuff-assisted colonoscopy significantly improves the adenoma detection rate without the introduction of adverse events or an effect on procedure time.

Objective

To conduct a meta-analysis on the impact of the endocuff-technology on the adenoma detection rate (ADR) in colorectal cancer screening.

Design

Meta-analysis of randomized controlled trial comparing the endocuff-technology (first or second generation) attached to a colonoscope in comparison to standard colonoscopy. A search for articles published before the end of 2017 was carried out on Google Scholar and Pubmed.

Studies and Participants

Of the 265 identified articles, 12 RCTs have been included, reflecting a population of 8,376 patients (Endocuff: 4,225; standard colonoscopy: 4,151).

Results

- ADR was 7 percentage points higher within the endocuff-assisted colonoscopy group in comparison to standard colonoscopy (SC: 34.2% vs. endocuff-technology: 41.2%; p-value: 0.003).
- Improvement of ADR was with 11.1% significantly higher in studies reporting an ADR lower than 35% in both treatment arms (SC: 22.2% vs. endocuff-technology 33.3%; p-value: 0.003), whereas no differences in ADR were observed in studies reporting an ADR above 45% (SC: 53.0% vs. endocuff-technology: 53.4%; p-value 0.87).
- Endocuff-technology led to a significantly higher polyp detection rate (51.4% vs. 61.6%; p-value: 0.003).
- Adverse events related to the endocuff-assisted colonoscopy group were mostly mild mucosal erosions and occurred in 4% of all cases; in studies evaluating ENDOCUFF VISON™ (second generation), the incident rate of adverse events was 0.5%.

Key Findings

Endocuff-technology is able to improve the polyp and adenoma detection rates in colorectal cancer screening, while introducing no additional risk (e.g. adverse events) for the patient. Improvement was highest in operators with a low to moderate ADR (ADR <35%).

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