Colonoscopy Adenomatous Polyp Detection Rate in Patients with Inadequate Bowel Prep

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Background

Colorectal cancer (CRC) is the third most common cancer and the fourth most common cause of cancer-related death worldwide.[1] Screening colonoscopies have been proven to reduce CRC mortality. However, the efficacy of colonoscopies can be hindered by poor bowel preparation. Lack of appropriate bowel preparation leads to poor visualization and a higher likelihood of missing polyps and other colonic lesions including CRC. Per ASGE, the recommended minimum threshold adenoma detection rate (ADR) for combined male and female population is 25%.[2] However, the average ADR from a large national US sample examining colonoscopies from 2014-2018 was as high as 39.05% and has increased over time.[3] Our retrospective study aims to identify the ADR for patients with inadequate bowel preparation noted during colonoscopies at our institution to emphasize the importance of quality bowel preparation.

Aims

- Identify ADR for inadequately prepared screening and non-screening colonoscopies at our institution
- Assess percentage of colonoscopies with inadequate bowel prep that missed a high-risk polyp which was then found on repeat colonoscopy

Methods

- During the years 2018-2020, a total of 250 inadequately prepared colonoscopies were examined at University of Louisville Hospital for our study.
- A Boston Bowel Preparation Scale (BBPS) was used with score of < 6 (inadequate preparation) and ≥6 (adequate preparation).
- 28 colonoscopies were excluded as these cases were aborted prior to the procedure due to brown stool being present on exam.
- 14 colonoscopies were missing pathology reports and were also excluded.

Statistical Analyses

Table 1: Poorly Prepped Colonoscopies with High-risk Polyps

	Number of patients	Percentage of high-risk lesions identified (ADR)
Total poorly prepped colonoscopies	250	
Screening colonoscopies with high-risk polyps	27	10.8%
Non-screening colonoscopies with high-risk polyps	8	7.2%
Total	35	18.0%

Table 2: Percentage of High-risk Polyps on Subsequent Colonoscopy

	Number of patients
Total subsequent colonoscopies after poor bowel prep	89
Repeat colonoscopies with high-risk polyps	29
Percent of subsequent colonoscopies with high-risk polyps	32.5%

Results

- This study specifically examined the adenomatous detection rate for patients with poor colonoscopy preparation.
- Of these, 27 patients with screening colonoscopy indications had adenomatous or high-risk polyps with an ADR of 10.8%. 8 non-screening colonoscopies had an ADR of 7.2%. This was well below the ASGE quality indicator for ADR for screening colonoscopies.[2]
- Additionally, there was a total of 91 the patients who came back for repeat colonoscopy within a 3-year time span after having poor bowel preparation or aborted procedure initially.
- 2 patients were missing pathology reports and excluded.
- 29 out of 89 patients were found to have adenomatous or high-risk polyps for a total of 32.5% of patients with repeat colonoscopy who initially had poor bowel preparation or aborted procedure.

Conclusion

- Having a BBPS score of 5 or less considerably decreased ADR compared to ASGE standards.
- It is critically important that patients who have poor bowel prep return for repeat colonoscopy due to high likelihood of missing adenomatous or high-risk polyps as shown by the follow-up data.
- ADR is far below the endoscopist expectation without adequate bowel preparation in both screening and non-screening colonoscopies.

References

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