

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: This review article presents the techniques and methods available to assist in the difficult colonoscopy procedure. It is particularly clinically useful because it describes most of the modalities currently available. It is useful to know how to select the next modality when the colonoscopy is difficult to observe and additional tests are needed. For example, is there a report that CT colonography is preferable in patients older than 85 years and balloon endoscopy in younger patients? I would like the author's opinion on what the next modality should be when insertion was difficult due to pain and the bowel is too long to reach.

There is no specific data available to help guide the decision regarding elderly patients, and as such the scope of the study is how to manage difficult colonoscopy. That being said, pursuing colonoscopy and CT colonography in patients older than 85 years old requires (as for all patients but especially in this population) an extensive risk benefit discussion. We added the following statement: "Particularly in elderly patients or those with significant comorbidities, after discussion with the patient a decision not to pursue additional testing may also be appropriate."

When the insertion is too difficult due to pain, we recommend utilization of anesthesia support to help. If the bowel is too long (and not tortuous or looping), could consider utilization of a longer scope such as enteroscope. We added the following statement: "In our experience, a "long" colon usually occurs in combination with tortuosity or looping, or both. As such, utilization of the techniques above would be helpful in managing the long colon. However, in the absence of tortuosity or looping, one could consider utilization of the enteroscope (without the overtubes for the additional length), or utilization of single or double-balloon enteroscope."

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: Difficult colonoscopy is indeed a problem that endoscopic surgeons may face in their practical work, and it is of practical clinical value to pay attention to and solve this problem. This review is well written. It reviews and summarizes the current situation of difficult colonoscopy, the factors that make colonoscopy difficult, the techniques for dealing with difficult colonoscopy and the equipment for managing difficult colonoscopy. Finally, it also shares the relevant experience of the author's own endoscopy center. This review is helpful for beginners in clinical colonoscopy. Here are some tips for this review: 1. Some disease factors, such as Parkinson's disease, are also risk factors for increasing colonoscopy time. Can other disease factors be briefly mentioned?

While other factor including PD may increase colonoscopy time, the factors listed in the article, are directly from studies evaluating difficult colonoscopy.

2. The simple manipulation of the nurse or assistant and the change of the position in the presence of difficult colonoscopy are very practical in dealing with difficult colonoscopy,

especially in some basic hospitals. It is also suggested to appropriately increase the relevant content. 3. References is suggested to update the latest references.

Thank you we completely agree with the points regarding managing positioning and manipulation/pressure by staff. We do not focus on this, as there have been other studies looking at this. We provide updated reference for this with the following statement: “We will not be focusing on specific techniques in managing issues such as looping, as this has been extensively covered in articles and books such as by Cotton et al.^{2,3}”

Reviewer #3:

Scientific Quality: Grade D (Fair)

Language Quality: Grade B (Minor language polishing)

Conclusion: Rejection

Specific Comments to Authors: i thought that the manuscript would explain some anatomical tricks of colon which may hinder complete examination, types of looping, how to overcome them and how to overcome difficult intubation of splenic and hepatic flexures, methods of ileal intubation then the recent advances in colonoscopy.

Thank you – this review was specifically looking at advances in colonoscopy to manage difficult colonoscopy. There have been several articles/books written already about difficult intubation techniques, including by Cotton.