Dear Editor-in-Chief

We would like to thank you and the reviewers for taking precious time to review the manuscript and suggest excellent recommendations. The implementation of these recommendations has markedly enhanced the quality of the manuscript tremendously.

We have revised the manuscript as per the suggestions of the esteemed reviewers. However, if there are some shortcomings or any further suggestions, kindly do let us know. We would be delighted to carry out the changes.

The changes have been highlighted in yellow color in the revised manuscript and have been included here along with the response to the questions.

Thank you once again

Pankaj Garg

Corresponding Author

Reviewer #1:
Scientific Quality: Grade C (Good)
Language Quality: Grade B (Minor language polishing)
Conclusion: Major revision
Specific Comments to Authors:

1. The abstract is poorly written; the first sentence does not give the content of the paper or which scoring system it is about. The abstract is intended to present the problem; it does not give the classifications (Rome IV), etc., and does not define the problem in terms of classifications. It does not define what the contribution of the publication will be.

Ans: Thanks for pointing these out. The complete abstract has been rewritten incorporating all the recommended changes. This has really enhanced the value of the manuscript.

The main aim of this opinion review is to comment on the recent article published by Garg et al. in the World Journal of Gastroenterology 2023; 29(29): 4593-4603. The authors in the published article developed a new scoring system, Garg incontinence scores (GIS), for fecal incontinence (FI). FI is a chronic debilitating disease which has a severe negative impact on the quality of life of the patients. Rome IV criteria defined FI as multiple episodes of solid or liquid stool passed into the clothes at least twice a month. The associated social stigmatization often leads to significant underreporting of the condition which further impairs management. An important point is that the complexity and vagueness of the disease makes it difficult for the patients to properly define and report the magnitude of the problem to their physicians. Due to this, the management becomes even more difficult. This issue is

resolved up to a considerable extent by a scoring questionnaire. There were several scoring systems in use for the last three decades. The prominent of them were the Cleveland Clinic scoring system or the Wexner scoring system, St. Marks Hospital or Vaizey's scores, and the Fecal Incontinence Severity Index (FISI). However, there were several shortcomings in these scoring systems. In the opinion review, we tried to analyse the strength of GIS and compare it to the existing scoring systems. The main pitfalls in the exiting scoring systems were that most of them gave equal weightage to different types of FI (solid, liquid, flatus, etc.), were not comprehensive and took only surgeon's perception about FI into the view. In GIS, almost all shortcomings of previous scoring systems had been addressed- different weights were assigned to different types of FI by a robust statistical methodology, the scoring system was made comprehensive by including all types of FI which were previously omitted (urge, stress and mucus FI) and gave priority to patients rather than the physicians perceptions while developing the scoring system. Due to this, GIS indeed looked like a paradigm shift in evaluation of FI. However, it is too early to conclude this, as GIS needs to be validated for accuracy and simplicity in future studies.

2. FI in IBD should be defined and the proportion in relation to the overall incidence reported. Causes of postpartum FI, causes, method of care for pelvic floor trauma and association with FI.

Ans: Thanks for pointing this out. This has been implemented.

The prevalence of FI in inflammatory bowel disease (IBD) is high, as recent studies have shown that FI can occur in up to 21% (as per Rome IV criteria) of patients with ulcerative colitis[2]. The incontinence rates remained high even when the patients were in remission and associated with significant psychological distress, symptom burden, and impaired QoL[2]. The incontinence rates in IBD were 10-12 times the global prevalence of FI in the general population using the same diagnostic criteria[9]. The risk of FI increases significantly in parous women with inflammatory bowel disease[10].

Fecal incontinence due to gynecological trauma (traumatic vaginal birth) can occur in up to 8% of women[8]. Third-degree (i.e., involving the external anal sphincter) and fourth-degree lacerations (i.e., extending through the external and internal anal sphincters) are strong risk factors for anal and fecal incontinence[11]. The risk is highest for instrument-assisted deliveries, with increased odds of 1.5 for anal incontinence and a higher risk with forceps than vacuum extraction[12]. Incidentally, the symptoms often do not manifest until several years after the injury, and various factors such as hormonal changes during menopause, accelerated aging of traumatically damaged sphincter muscles, or decompensation of compensatory mechanisms probably contribute to this delay[1]. In primiparous women, it is possible to prove occult or at least minimal sphincter injuries in approximately 35% of cases[8, 13]. The delivery with utilization of forceps, the occipital-posterior position of the child, and prolonged delivery represent independent risk factors for subsequent fecal incontinence[8, 13]. It is estimated that approximately 13% of women experience varying degrees of incontinence or stool urgency after first delivery[14]. As these are mostly young women, the impact of incontinence on their quality of life is substantial[15].

3. FI as a side-effect of medication or associated with a certain lifestyle, definition and definition is needed.

Ans: Thanks for pointing this out. This has been implemented. This has enhanced the quality of the manuscript significantly.

Loose stools are a major risk factor for FI[16]. Correction of reversible factors like laxatives or other medications can help. Dietary trials (e.g., low lactose or low fructose) in selected patients can normalize stool form. Among fiber supplements, only psyllium but not gum arabic or carboxymethylcellulose improved FI compared with placebo[17]. Medications can also cause or aggravate FI. These medications are laxatives, such as lactulose, docusate, or bisacodyl; cancer medications, such as cyclophosphamide, 5-fluorouracil, or paclitaxel; antibiotics, such as cephalosporins,

penicillins, macrolides or Amphotericin B- liposomal, antacids that contain magnesium, Arsenic trioxide, Orlistat, Quetiapine, Rivastigmine, , Donepezil, sweeteners and caffeine[18].

Fecal incontinence is defined as the involuntary loss of rectal contents (feces, gas) through the anal canal and the inability to postpone an evacuation until socially convenient. The symptoms should have been present for a duration of at least one month, and the patient's age should be at least 4 years with previously achieved control[1]. The Rome Foundation recommended diagnostic criteria for FI in 2006 (Rome III criteria) and revised them in 2016 (Rome IV criteria)[2]. In both cases, FI was defined as multiple episodes of solid or liquid stool passed into clothes, but the accidental loss of flatus was ignored[2]. For Rome III criteria, at least 1 FI event per month was required to be labeled as a patient of FI, but for Rome IV, it was modified to at least two episodes of FI per month.

4. The significance of the individual indices should be compared with functional tests to demonstrate FI.

Ans: Thanks for pointing this out. This has been implemented. This has greatly enhanced the quality of the manuscript.

The individual indices should be compared with functional tests to demonstrate FI. There are various tests that can help in evaluation of FI.

Anorectal manometry helps in anorectal physiology testing, which can give insight and objectively document pelvic floor function[19]. The manometry may not correlate accurately with clinical examination or predict the response to treatment, but the assessment can be helpful in guiding therapy[19]. Sphincter pressures are usually low in FI, but they might be normal or increased in the presence of anismus or incomplete evacuation, especially in men with FI[19]. Low internal sphincter pressures are seen in patients with leakage or passive incontinence, whereas external sphincter pressures are associated with urgent, active incontinence. Rectal

hyposensitivity may be associated with constipation associated with incontinence[20], whereas rectal hypersensitivity may be seen in patients with urgency, diarrhea, IBS, low anterior resection syndrome, or radiation. Rectal compliance can be decreased in inflammatory bowel disease, after radiation, or in patients with scleroderma[20].

Anal ultrasound provides an objective assessment of the sphincter integrity and can detect injuries or anatomic deficiencies of the internal and external anal sphincters[21]. Ultrasound is relatively cheap, is conveniently available for the surgeon, and offers the best imaging of the internal sphincter. MRI can be an alternative for imaging, especially for the anterior part of the external sphincter or imaging of concomitant pelvic prolapse. Pelvic floor ultrasound can identify pelvic organ prolapse and

other anatomical abnormalities that may contribute to FI[21].

Anorectal neurophysiology testing of the pelvic floor can be achieved with pudendal nerve terminal motor latency (PNTML) testing and electromyography (EMG)[21]. PNTML helps in the evaluation of the neuromuscular integrity between the pudendal nerve and the anal sphincter[21]. Sphincter mapping with EMG can identify sphincter defects and identify signs of nerve injury. Both these techniques are infrequently used as they are invasive, and their accuracy is doubtful[21].

Defecography helps to evaluate the dynamic of defecation and can be performed with fluoroscopy or MRI. For FI, the exam can be valuable to confirm the inability to retain stool, which is a measurement of the severity of the FI, and to identify impaired evacuation and/or pelvic organ prolapse contributing to FI[21].

Reviewer #2:
Scientific Quality: Grade A (Excellent)
Language Quality: Grade B (Minor language polishing)
Conclusion: Minor revision
Specific Comments to Authors: Manuscript ID: 88701 Manuscript Title: Garg Incontinence Scores (GIS): A new scoring system on the horizon to evaluate fecal incontinence- Will it make a difference? Journal: World Journal of Gastroenterolog The MS can be considered for publication if the authors addresses the following issues.

Abstract Section

1.Revise "There are several scoring systems in use for the last three" to "There were several scoring systems in use for the last three".

Ans: Thanks for pointing this out. This has been implemented.

There were several scoring systems in use for the last three decades

2.Revise "The prominent of them are" to "The prominent of them was".

Ans: Thanks for pointing this out. This has been implemented.

The prominent of them were the Cleveland Clinic scoring system or the Wexner scoring system, St. Marks Hospital or Vaizey's scores, and the Fecal Incontinence Severity Index (FISI).

3.Revise "we have tried the analyse" to "we tried to analyse".

Ans: Thanks for pointing this out. This has been implemented.

In the opinion review, we tried to analyse the strength of GIS

4.Revise "GIS and compared it" to "GIS and to compare it".

Ans: Thanks for pointing this out. This has been implemented.

In the opinion review, we tried to analyse the strength of GIS and to compare it to the existing scoring systems.

5.Please supplement results and conclusions.

Ans: Thanks for pointing this out. Results and conclusions have been added in the abstract.

The main pitfalls in the exiting scoring systems were that most of them gave equal weightage to different types of FI (solid, liquid, flatus, etc.), were not comprehensive and took only surgeon's perception about FI into the view. In GIS, almost all shortcomings of previous scoring systems had been addressed- different weights were assigned to different types of FI by a robust statistical methodology, the scoring system was made comprehensive by including all types of FI which were previously omitted (urge, stress and mucus FI) and gave priority to patients rather than the physicians perceptions while developing the scoring system. Due to this, GIS indeed looked like a paradigm shift in evaluation of FI. However, it is too early to conclude this, as GIS needs to be validated for accuracy and simplicity in future studies.

Core tip

Section 6.Revise "There are several scoring systems to assess" to "Several scoring systems were used to assess".

Ans: Thanks for pointing this out. This has been implemented.

Several scoring systems were used to assess fecal incontinence (FI),

7.Revise "most commonly used are" to "most commonly used were".

Ans: Thanks for pointing this out. This has been implemented.

among which the most commonly used were Wexner's, Vaizey's, and FI Severity Index scoring systems.

8.Revise "we have analyzed the GIS" to "we analyzed GIS".

Ans: Thanks for pointing this out. This has been implemented.

In the commentary, we analyzed the GIS while comparing it to the existing scoring systems.

9.Revise "GIS seems to" to "GIS seemed to".

Ans: Thanks for pointing this out. This has been implemented.

GIS seemed to be a major improvement over the existing scoring system as almost all shortcomings of previous scores have been addressed

Introduction

Section 10.Revise "population worldwide. [1-6]" to "population worldwide[1-6].".

Ans: Thanks for pointing this out. This has been implemented.

it is estimated that this problem afflicts about 15% of the population worldwide[1-6].

11.Revise "35 years[7-9] The" to "35 years[7-9]. The".

Ans: Thanks for pointing this out. This has been implemented.

To achieve this goal, many scoring systems have been published in the last 35 years[7-9].

12.Revise "scoring system.[7] It " to "scoring system[7]. It ". Please pay attention to similar issues.

Ans: Thanks for pointing this out. This has been implemented in this sentence and at every place in the manuscript.

became popular was the Cleveland Clinic scoring system or the Wexner scoring system[7].

13.Revise "Jorge et al. (Table-1)" to "Jorge et al. (Table 1)".

Ans: Thanks for pointing this out. This has been implemented.

Jorge et al. (Table 1).

14.Revise "scores (Table-2)." to "scores (Table 2).".

Ans: Thanks for pointing this out. This has been implemented.

Vaizey's[8] scores (Table 2).

15.Revise "in 1999 (Table-3)" to "in 1999 (Table 3)".

Ans: Thanks for pointing this out. This has been implemented.

Rockwood et al. in 1999 (Table 3)[9].

16.Revise "Garg et al (Table-4)" to "Garg et al (Table 4)".

Ans: Thanks for pointing this out. This has been implemented.

by Garg et al (Table 4)[10].

17.Revise "nd GIS (Table-5)." to "nd GIS (Table 5).".

Ans: Thanks for pointing this out. This has been implemented.

Vaizey scores and GIS (Table 5).

18.Revise "it seems that the Garg incontinence scores (GIS)" to "it seems that GIS".

Ans: Thanks for pointing this out. This has been implemented.

So, it seems that the GIS is a major improvement