Adherence of gastroenterologists to European Crohn's and Colitis Organisation consensus on ulcerative colitis: A real-life survey in Spain

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KEYWORDS
Ulcerative colitis; ECCO clinical guidelines; Inflammatory bowel disease; 5-ASA; Mesalazine; Questionnary

Abstract

Background & aims: A European consensus on the management of ulcerative colitis (UC) was recently published; however, there is no adequate evidence about adherence to such guidelines among gastroenterologists. This knowledge would allow the local evaluation of the situation and the adoption of actions to reduce the existent clinical variability.

Methods: A cross-sectional survey was conducted in Spain to assess the adherence to the European Crohn’s and Colitis Organisation (ECCO) guidelines on mild to moderate UC. We surveyed 700 gastroenterologists, and finally a total of 530 gastroenterologists specialised in inflammatory bowel disease (GSIBDs) and general gastroenterologists (GGs), responded to the survey (76%).

Results: Agreement with the guidelines was high; discrepancies included that only 25% of the GGs used the combination of oral and topical 5-aminosalicylic acid (5-ASA) for treating extensive UC vs 45% of the GSIBDs. In addition, topical rectal steroids were considered as effective as topical mesalazine by 48% of the GGs vs 31% of the GSIBDs, indefinite treatment with 5-ASA was prescribed by only 26% of the GGs vs 41% of the GSIBDs, and the once daily dosing of 5-ASA was generally used by 46% of the GGs vs 51% of the GSIBDs.

Conclusions: The questionnaire showed a high degree of agreement between GGs and GSIBDs. Nevertheless, the GSIBD group showed closer agreement with the ECCO guidelines. Furthermore, some shortcomings were found in the GG group, in which increased maintenance treatment with

Abbreviations UC, Ulcerative Colitis; ECCO, European Crohn’s and Colitis Organisation; GG, General Gastroenterologist; GSIBD, Gastroenterologist Specialised in inflammatory Bowel disease; IBD, Inflammatory Bowel Disease; NA, Not Applicable; 5-ASA, 5-aminosalicylic acid; EL, Evidence Level; RG, Recommendation Grade.

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1. Introduction

Ulcerative colitis (UC) is a chronic inflammatory disease whose multifactorial aetiology, resulting from the combination of genetic and environmental factors, has not yet been fully established, and which may severely impair patient quality of life. Despite the complexity of the disease, scientific progress in Gastroenterology has allowed the development of new diagnostic procedures and therapeutic approaches. Medical advances have generated an increasingly extensive scientific literature and have made decision taking more complex raising the possibilities for greater variability in clinical practice. From a scientific viewpoint, Evidence-Based Medicine provides various highly useful tools for patient treatment, including clinical guidelines or consensus documents. In the field of inflammatory bowel disease (IBD), one of the most relevant instruments is the European consensus document on the diagnosis and treatment of UC, supported by the European Crohn’s and Colitis Organisation (ECCO). This document is aimed to reduce the differences in clinical practice between different countries and to promote a consistent approach to management of the disease. The document was prepared by specialists in IBD from 23 European countries and consists of three parts: definitions and diagnosis, current management, and special situations. Since the document was recently published, no adequate evidence has emerged to assess the extent to which gastroenterologists follow its recommendations.

In order to assess the situation in Spain, and thus be able to design future actions aimed at reducing variability in standard clinical practice, a cross-sectional survey was conducted among Spanish gastroenterologists to assess their understanding of the management of some situations characteristic of mild to moderate UC and the degree of concordance of the medical decisions taken with the current European ECCO consensus guidelines. The gastroenterologists surveyed were divided into two groups: general gastroenterologists (GGs) and gastroenterologists specialised in IBD (GSIBDs). This manuscript focuses on those medical decisions for which differences were found between the two groups, suggesting the need for improved dissemination of information and for identifying areas where understanding may be inadequate.

2. Materials and methods

2.1. Survey structure

A total of 530 questionnaires were completed. An ECCO consensus-based recommendation was available for 16 of the 27 questions in the questionnaire.

The questionnaire consisted of 27 questions structured in sections related to disease diagnosis and treatment: general data, disease classification and diagnosis, treatment of proctitis, distal colitis, and extensive mild to moderate colitis, corticosteroid-dependent or corticosteroid-refractory conditions, and maintenance treatment.

The questionnaire was designed by the authors, who are gastroenterologists with special dedication to IBD with more than 10 years of experience in this area and who lead IBD units in University Hospitals. To assess understandability, special care was taken to reflect in the questions actual clinical situations in which the guidelines could be applied (see Annex 1 for questionnaire contents).

2.2. Sample size

Assuming a total number of 2200 gastroenterologists (both general and specialised) in Spain, it was established with 95% confidence and 4% sample error (this being considered an acceptable error by the authors) that 538 gastroenterologists would have to be surveyed, assuming the worst case scenario ($p=q=0.5$).

2.3. Survey distribution and follow-up procedures

Participants were allowed two months to complete the survey. Questionnaires were distributed and collected by staff from the Ferring S.A.U. medical department. Data were entered into an Excel spreadsheet (Microsoft Office 2007) and subsequently exported to the SPSS (version 16.0 statistical package) for analysis.

2.4. Statistical analysis

Since all the study variables are qualitative, they have been expressed as frequency ($n$) and percentages (%) with their corresponding 95% confidence interval (95% CI). A Chi-square test was used for comparisons between groups (GGs and GSIBDs). In addition, as this was a cross-sectional survey, the prevalence odds ratio (POR) was calculated to clarify some of the most significant associations. A value of $p<0.05$ was considered statistically significant.

3. Results

3.1. General and epidemiological data relating to practice in UC

The great majority of the participants in the survey worked in public hospitals (77%), while 3% had private practices, and 16.2% had both public and private practices (Table 1). The questionnaire allowed the physicians to identify themselves as GGs (62%) or as GSIBDs (32%). With regard to the total...
number of attended UC patients, this was less than 200 for most GGs (84.2%), 200–500 for most GSIBDs (44%) and more than 500 patients for 23% of GSIBDs (see Table 1).

Standard medical practice by the Spanish gastroenterologists showed an 87.5% agreement with the ECCO guidelines (the answers to 14 of the 16 questions of the survey coincided with the ECCO recommendations).

3.2. Disease classification and diagnosis

- ECCO STATEMENT: Smoking has a protective effect against UC development [EL 2b, RG B] (Table 2). A significantly greater proportion of GSIBDs as compared to GGs agreed with the ECCO recommendation [POR multiplies this effect by 2.86 [95%CI, (1.78–4.61)].

- ECCO STATEMENT: Infectious causes that may mimic UC symptoms have to be ruled out. Most GGs and GSIBDs (82% and 94% respectively) rule out infectious causes using stool cultures and tests for the Clostridium difficile toxin as shown in Fig. 1.

- Use of colonoscopy to confirm extent, activity of each UC flare-up and treatment efficacy. Fig. 2 shows that most GGs (71%) and GSIBDs (79%) do not use colonoscopy for each UC flare-up. In addition, colonoscopy is also rarely used by physicians to confirm efficacy following treatment of an UC flare-up (see graph B).

3.3. Treatment of proctitis, distal colitis and extensive mild to moderate colitis

- Use of mesalazine in mild to moderate UC. Fig. 3 shows that oral and topical treatment with mesalazine is selected by 25% of the GGs and 19% of the GSIBDs as first choice therapy for patients with proctitis. For patients with distal colitis, topical mesalazine was considered as the therapy of choice by 12% of the GGs and 17% of the GSIBDs (Fig. 3); there were no statistically significant differences in any case. A significant association was however found between the groups and the option selected as first choice treatment for extensive mild to moderate colitis: whereas 45% of GSIBDs chose the combination of oral and topical 5-ASA, as recommended in the guidelines, this was only done by 25% of the GGs (see Table 3). No significant differences were detected between the responding groups in relation to the mesalazine doses used for disease flare-ups and maintenance therapy; the dosage most commonly used for flare-ups is 5.g.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Demographic characteristics of the surveyed physicians.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>All (%)</td>
</tr>
<tr>
<td>(n=530)</td>
<td>(n=325)</td>
</tr>
<tr>
<td>Type of practice</td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>77</td>
</tr>
<tr>
<td>Private</td>
<td>3</td>
</tr>
<tr>
<td>Both</td>
<td>16</td>
</tr>
<tr>
<td>NA</td>
<td>4</td>
</tr>
<tr>
<td>Number of patients</td>
<td></td>
</tr>
<tr>
<td>0–200</td>
<td>64</td>
</tr>
<tr>
<td>200–500</td>
<td>24</td>
</tr>
<tr>
<td>&gt;500</td>
<td>1</td>
</tr>
<tr>
<td>NA</td>
<td>4</td>
</tr>
</tbody>
</table>

GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; NA = Not applicable; ns = Statistically not significant.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Evidence levels and grades of recommendation based on those reported by the Oxford Centre for Evidence Based Medicine (for details see</th>
<th><a href="http://www.cebm.net/levels_of_evidence.asp?ref">http://www.cebm.net/levels_of_evidence.asp?ref</a>).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>Diagnostic study</td>
<td>Therapeutic study</td>
</tr>
<tr>
<td>1a</td>
<td>Systematic review (SR) with homogeneity of level 1 diagnostic studies.</td>
<td>Systematic review (SR) with homogeneity of randomized controlled trials.</td>
</tr>
<tr>
<td>1b</td>
<td>Validating cohort study with good reference standards.</td>
<td>All or none</td>
</tr>
<tr>
<td>1c</td>
<td>Specificity is so high that a positive result rules in the diagnosis (&quot;SpPin&quot;) or sensitivity is so high that a negative result rules out the diagnosis (&quot;SnNout&quot;).</td>
<td>SR (with homogeneity) of cohort studies.</td>
</tr>
<tr>
<td>2a</td>
<td>SR with homogeneity of level &gt;2 diagnostic studies.</td>
<td>Individual cohort study (including low quality RCT; e.g., 80% follow up).</td>
</tr>
<tr>
<td>2b</td>
<td>Exploratory cohort study with good reference standards.</td>
<td>&quot;Outcomes&quot; research; ecological studies.</td>
</tr>
<tr>
<td>2c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>SR with homogeneity of 3b and better studies.</td>
<td>Individual case-control study.</td>
</tr>
<tr>
<td>3b</td>
<td>Non-consecutive study; or without consistently applied reference standards.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Case-control study, poor or non-independent reference standard.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Expert opinion without explicit critical appraisal, or based on physiology, bench of research or &quot;first principles&quot;.</td>
<td></td>
</tr>
</tbody>
</table>

Grades of recommendation

A | Consistent level 1 studies |
B | Consistent level 2 or 3 studies or extrapolations from level 1 studies |
C | Level 4 studies or extrapolations from level 1 studies |
D | Level 5 evidence or troublingly inconsistent or inconclusive studies of any level |
ups was 4 g daily, while 2 g daily were used by both groups for maintenance therapy (Fig. 4). On the other hand, indefinite 5-ASA therapy was more widely used by GSIBDs (41%) than by GGs (26%) \( (p=0.003) \) (Table 3). However, a virtually complete agreement was observed in both groups as to the potential of this treatment for protecting against colon cancer, this conviction being greater in the GSIBD group (99.4% vs 94.3%, \( p<0.05 \)). On the other hand, Fig. 5 shows that once-daily mesalazine is routinely recommended by 46% of the GGs and by 51% of the GSIBDs.

- Use of corticosteroids for mild to moderate UC. In the treatment of mild to moderate distal colitis, a greater proportion of GGs (47%) as compared to GSIBDs (31%) thought that rectal topical steroids were as effective as topical mesalazine \( (p<0.001) \) (Table 3). In turn, 41% of the GGs and 34% of the GSIBDs answered that they rarely used the combination of oral mesalazine and topical corticosteroids in patients not responding to treatment with oral and topical mesalazine.

- Corticosteroid dependency and refractoriness. In corticosteroid-dependent patients, most physicians prescribed azathioprine/mercaptopurine; specifically, 93% of the GGs and 92% of the GSIBDs chose immunosuppressants. On the other hand, in patients refractory to oral corticosteroids, intravenous corticosteroids were chosen by 57% of the GGs and by 70% of the GSIBDs, no statistically significant differences being observed between them (Table 3).

4. Discussion

The questionnaire – completed by 530 gastroenterologists – is probably representative of the specialization in Spain. Data from this survey may allow the implementation of measures to improve decision making, decrease variation between specialists, and eventually improve the management of patients with mild to moderate UC. However, a limitation of this study is that the survey responses might not be reflective of actual decision-making in clinical practice.

As regards treatment for mild to moderate UC, the questionnaire results agree with the ECCO statement \([EL1b, RG B]\) in considering topical mesalazine to be the therapy of choice for mild to moderate proctitis, and the combination of oral and topical 5-ASA as the most appropriate option for mild to moderate distal colitis. There was less agreement in considering topical corticosteroids and topical mesalazine as equivalent. Thus, almost half the GGs consulted considered topical rectal steroids to be as effective as topical mesalazine, while three out of every four GSIBDs agreed with the ECCO guidelines in considering topical mesalazine to be more effective than topical steroids \([EL 1a, RG A]\). The recommendation is supported by studies showing that topical 5-ASA are more effective than rectal steroids, and are therefore the topical treatment of choice as monotherapy or as an adjuvant to oral 5-ASA or systemic steroids.8,9

Only 31.4% of Spanish gastroenterologists use as first choice the combination of oral and topical 5-ASA as recommended by ECCO7 \([EL1a, RGA]\) as the most adequate initial treatment for extensive mild to moderate UC. However, a greater proportion of GSIBDs (45%) as compared to GGs (25%) select this option. In this regard, Marteau et al. showed in a controlled study that combined therapy achieves a faster response in extensive colitis, with combined therapy being superior to oral therapy alone.10

![Figure 1](https://academic.oup.com/ecco-jcc/article-abstract/4/5/567/2366525/1562655)

**Figure 1** Tests selected to rule out infectious causes. GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; \( p = \) probability; ns = Statistically not significant.

![Figure 2](https://academic.oup.com/ecco-jcc/article-abstract/4/5/567/2366525/1562656)

**Figure 2** Use of colonoscopy to document the activity and extent of each flare-up of ulcerative colitis (Graph A). Proportion of gastroenterologists who perform a repeat colonoscopy to confirm effective treatment of a flare-up (Graph B). GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; \( p = \) probability; ns = Statistically not significant.
Adherence to European consensus

Figure 3  Administration route selected for mesalazine treatment in patients with proctitis and mild to moderate distal colitis. GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; p = probability; ns = Statistically not significant.

Table 3  Points on which disagreement existed between the surveyed physicians.

<table>
<thead>
<tr>
<th>Variable</th>
<th>GGs (%)</th>
<th>GSIBDs (%)</th>
<th>All (%)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking protects against development of ulcerative colitis</td>
<td>63</td>
<td>83</td>
<td>64</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Topical rectal steroids are effective as topical mesalazine</td>
<td>47</td>
<td>31</td>
<td>38</td>
<td>0.001</td>
</tr>
<tr>
<td>For extensive colitis, I use combined oral and topical 5-ASA as first option (^a)</td>
<td>25</td>
<td>45</td>
<td>32</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>For extensive colitis, I use combined oral and topical 5-ASA and corticosteroids as first option (^a)</td>
<td>50</td>
<td>27</td>
<td>42</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>For patients refractory to oral corticosteroids, I use as treatment:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV Corticosteroids</td>
<td>57</td>
<td>70</td>
<td>60</td>
<td>ns</td>
</tr>
<tr>
<td>Ciclosporine</td>
<td>9</td>
<td>6</td>
<td>9</td>
<td>ns</td>
</tr>
<tr>
<td>Infliximab</td>
<td>28</td>
<td>15</td>
<td>24</td>
<td>ns</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>ns</td>
</tr>
<tr>
<td>Indefinite maintenance treatment with aminosalicylates</td>
<td>26</td>
<td>41</td>
<td>31</td>
<td>0.003</td>
</tr>
<tr>
<td>Sullasalazine is equivalent to mesalazine</td>
<td>69</td>
<td>79</td>
<td>71</td>
<td>0.004</td>
</tr>
<tr>
<td>Indefinite maintenance treatment with aminosalicylates protects against colon cancer</td>
<td>94</td>
<td>99</td>
<td>81</td>
<td>0.008</td>
</tr>
</tbody>
</table>

GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; p = probability; ns = Statistically not significant.

\(^a\) All other options are not included.

Figure 4  Standard oral mesalazine dose used for treating flare-ups of ulcerative colitis and for maintenance treatment. GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; p = probability; ns = Statistically not significant.

Figure 5  Use of once daily dosing with oral 5-ASA. GGs = general gastroenterologists; GSIBDs = gastroenterologists specialised in inflammatory bowel disease; p = probability; ns = Statistically not significant.
On the other hand, there were no significant differences in the daily oral dose of mesalazine recommended for the treatment of mild to moderate UC. Four grams daily was the dose most commonly selected by both groups for active treatment, while 2 grams daily was the dosage selected by almost three quarters of Spanish gastroenterologists as maintenance treatment. The ECCO consensus document recommends 2 g and 1 g as the minimum doses for flare-ups and as maintenance respectively. However, data reported in the literature suggest that higher doses may be more effective.

Another outstanding aspect in the survey is the significant support by both groups of gastroenterologists of the once-daily administration of mesalazine, routinely prescribed by half the participants. It is now becoming greatly relevant to find tools that improve patient adherence to treatment, as it has been found that multiple dosing is related to a significantly increased risk of UC flare-ups, and treatment adherence rates lower than 40% have been reported. This may result in higher final costs. There is no formal recommendation in this regard in the ECCO guidelines, despite the fact that the authors report studies stating that once-daily dosing achieves better results in remission maintenance as compared to multiple dosing. The results of the first long-term efficacy trial of maintenance therapy have recently been published. In this trial, 71% of patients receiving a single daily dose of 2 g of mesalazine remained in remission, as compared to 59% of those taking 1 g twice daily, the differences being statistically significant.

The questionnaire has revealed significant differences between gastroenterologists as regards the use of mesalazine in other aspects of UC management. The support to general and indefinite maintenance therapy with mesalazine during remission was not universal; this proportion was greater in GSIBDs as compared to GGs. However, both groups of physicians virtually agree on the chemoprotective effect of mesalazine in colorectal cancer (Table 3). The main argument to justify maintenance treatment was the finding in an early study that almost three quarters of patients on remission experienced a relapse within 12 months if they were receiving no treatment. In addition, the most recent retrospective studies published agree in stating that long-term treatment with 5-ASA also decreases the risk of developing colorectal cancer and dysplasia in patients with long-standing UC. However, these data should be assessed in future prospective, randomised studies.

In summary, data collected using this questionnaire show a high degree of agreement between GGs and GSIBDs with regard to the management of mild to moderate UC in Spain, though the GSIBD group appears to show greater agreement with the ECCO guidelines as compared to the GG group. Furthermore, some shortcomings were found in the GG group, in which increased maintenance treatment with 5-ASA, the use of a single daily dose of 5-ASA, and the use of combined oral and topical treatment for distal colitis should be advised.

Based on our results, we think that there are two ways of improving: education and bringing the complex recommendations to short and easy checklists for some processes.

Acknowledgements

Authors declare having contributed equally to this work, in the conception and design of the study, interpretation of data, draft of the article and final approval of the version submitted.

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Authors would especially like to mention the Spanish investigators, who showed particular interest in participating in this study. We would also like to thank Ferring employees, Alonso Fernandez (statistical analysis), Eduardo Gonzalez (writing assistance) and Jose Manuel Jimenez for scientifically supporting this study.

Annex 1. Questionnaire: Adherence to European consensus

General data

Type of practice
➢ Public
➢ Private
➢ Both
➢ Hospital
➢ Outpatient
➢ Both

Speciality
➢ General gastroenterologist
➢ Gastroenterologist specialised in IBD
➢ Other (specify)

Number of patients with ulcerative colitis seen at your unit
➢ 0–200
➢ 200–500
➢ >500

Disease classification and diagnosis

1) When assessing UC activity, I use an activity index (Truelove, Seo, SCCAI,...)
➢ Never
➢ Rarely
➢ Usually
➢ Always

2) I think that smoking has a protective effect against UC development.
➢ Yes, I agree
➢ No, I do not agree
➢ NA

3) I think that use of NSAIDs increases the risk of UC flare-up.
➢ Yes, I agree
➢ No, I do not agree
➢ NA
4) In UC, I use C-reactive protein as a biological index of disease activity.
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

5) To rule out potential infectious causes which may mimic UC symptoms, I usually measure:
   ➢ C. difficile toxin
   ➢ Stool culture
   ➢ Both
   ➢ None

6) In each UC flare-up, I request a colonoscopy to document activity and extent of the flare-up.
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

7) Once flare-up treatment is completed, I confirm its efficacy by a repeat colonoscopy.
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

Treatment of mild to moderate proctitis
8) For proctitis (lesion <15 cm from the anus), I use as first choice mesalazine as:
   ➢ Oral treatment
   ➢ Topical treatment
   ➢ Suppositories
   ➢ Foam
   ➢ Enema
   ➢ Combined oral and topical treatment

9) I use topical corticosteroids administered by the rectal route.
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

Treatment of mild to moderate distal colitis
10) For distal colitis, I use mesalazine therapy as first choice.
    ➢ I do not use it
    ➢ Only oral
    ➢ Only topical
    ➢ Combining the oral and topical routes

11) I think that topical rectal steroids are as effective as topical mesalazine.
    ➢ Yes
    ➢ No
    ➢ NA

12) In patients not responding to combined oral and topical mesalazine therapy, I use a combination of oral mesalazine and topical corticosteroids rather than using systemic oral corticosteroids.
    ➢ Never
    ➢ Rarely
    ➢ Usually
    ➢ Always

Treatment of extensive mild to moderate colitis
14) For extensive mild to moderate colitis, I use as first choice:
    ➢ Oral 5-ASA alone
    ➢ Oral and topical 5-ASA
    ➢ Corticosteroids alone
    ➢ Combined 5-ASA and corticosteroids

15) When used, the standard dose of 5-ASA (mesalazine) for treating a flare-up in grams/day is:
    ➢ 4 grams/day
    ➢ 3 grams/day
    ➢ 2 grams/day
    ➢ 1 gram/day
    ➢ Other

16) In patients who experience a new flare-up, I restart treatment with the therapy that was previously effective for inducing remission.
    ➢ Never
    ➢ Rarely
    ➢ Usually
    ➢ Always

Corticosteroid-dependent or corticosteroid-refractory patients
17) In corticosteroid-dependent patients with ulcerative colitis:
    ➢ I prescribe azathioprine/mercaptopurine
    ➢ I prescribe leukocyte apheresis
    ➢ I prescribe infliximab
    ➢ I advise surgery

18) For patients refractory to oral corticosteroids, I use as treatment:
    ➢ Intravenous corticosteroids
    ➢ Cyclosporine
    ➢ Infliximab
    ➢ Surgery

Maintenance treatment
19) In patients with a first flare-up of ulcerative colitis who have responded to corticosteroids, my preferred maintenance treatment is:
    ➢ Mesalazine
    ➢ AZA
    ➢ Both combined
    ➢ Infliximab
20) In patients receiving maintenance treatment with azathioprine/mercaptopurine, I add 5-ASA.
   ➢ Never
   ➢ Sometimes
   ➢ Usually
   ➢ Always

21) The aminosalicylate dose I use for maintenance therapy is:
   ➢ The same as for the active phase
   ➢ Lower than for the active phase
   ➢ I do not use 5-ASA for maintenance

22) What do you think is the standard mesalazine dose for maintenance treatment in grams/day?
   ➢ 1 gram/day
   ➢ 2 grams/day
   ➢ 3 grams/day
   ➢ Other

23) When I recommend maintenance treatment with 5-ASA in UC patients, I prescribe it for an indefinite time.
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

24) When I recommend maintenance treatment with AZA in UC patients, I prescribe it for an indefinite time.
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

25) For maintenance treatment in UC, I think that sulfasalazine is, as compared to mesalazine.
   ➢ Less effective
   ➢ Equivalent
   ➢ More effective

26) For maintenance treatment, the dosage regimen of oral 5-ASA I recommend to my patients is once-daily dosing
   ➢ Never
   ➢ Rarely
   ➢ Usually
   ➢ Always

27) I think that indefinite maintenance treatment with 5-ASA protects against colon cancer.
   ➢ No, I do not agree
   ➢ Yes, I agree
   ➢ NA

References