

Management of Patients With Diverticulosis and Diverticular Disease

Consensus Statements From the 2nd International Symposium on Diverticular Disease

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Abstract: The statements produced by the Chairmen of the 2nd International Symposium on Diverticular Disease, held in Rome on April 8th to 9th, 2016, are reported. Topics such as epidemiology, risk factors, diagnosis, medical and surgical treatment of diverticular disease in patients with uncomplicated and complicated diverticular disease were reviewed by the Chairmen who proposed 41 statements graded according to level of evidence and strength of recommendation. Each topic was explored focusing on the more relevant clinical questions. The vote was conducted on a 6-point scale and consensus was defined a priori as 67% agreement of the participants. The voting group consisted of 80 physicians from 6 countries, and agreement with all statements was provided. Comments were added explaining some controversial areas.

Key Words: diverticulosis, diverticular disease, diverticulitis, consensus, diagnosis, medical therapy, surgical therapy

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Diverticulosis of the colon is the most frequent structural alteration of the colon in industrialized countries, the highest rates occurring in the United States and Europe. This condition nowadays ranks as fifth most important gastrointestinal disease in terms of direct and indirect costs.^{1,2} When diverticulosis becomes symptomatic, it is called “diverticular disease” (DD), a term which also generally includes acute diverticulitis.^{1,2}

Although the pathogenesis and management of diverticulosis and DD remain uncertain, new hypotheses and observations are changing the pharmacological and surgical management of DD.

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Recommendations for the diagnosis and treatment of DD have been issued by many medical societies in various countries. However, these recommendations are often conflicting,^{3–5} generating uncertainties in the clinician and dissatisfaction in patients.

We have summarized the current perspective on DD in this consensus conference report, aiming to develop guidelines for the clinical, diagnostic, and therapeutic management of DD in light of the presentations during the 2nd International Symposium on Diverticular Disease, held at Rome on April 8th to 9th, 2016.

METHODS

The primary aim of this document was to provide clinical guidelines for appropriate definition, diagnosis, and management of DD according to the opinion of the participants to the 2nd International Symposium on Diverticular Disease. The promoters of this initiative were the Chairmen of this International Symposium (A.T., F.D.M., C.S., and G.B.).

The modified statements of the recent Italian Consensus conference on DD were used to identify statements of this symposium.³ Only few changes were performed. In particular, statements about use of rifaximin and mesalazine were changed according to most recent literature, using Medline/PubMed and the Cochrane Database. Each new recommendation was graded according to the Oxford Centre for Evidence-Based Medicine, according to the evidence level (EL).⁶

The 2nd International Symposium on Diverticular Disease was structured into 5 main sessions (pathogenesis, course of the disease, diagnosis, medical treatment, and surgical treatment). Participants, constituted by multidisciplinary professionals/experts such as gastroenterologists, gastrointestinal endoscopists, pharmacologists, surgeons, radiologists, pathologists, internists, and general practitioners, were asked to vote each statement linked to the session at the end of the same session. Chairmen, speakers, and members of the scientific board did not take part to vote. The agreement/disagreement level was scored on a 6-point Likert scale as follows: A + : strongly agree; A : agree with minor reservations; A – : agree with major reservations; D – : disagree with major reservations; D : disagree with minor reservations; and D + : strongly disagree. Level of agreement was expressed as percentage of each point of the scale. Consensus was defined a priori as agreement by at least 67% of respondents.

The format of the following recommendations comprises the question, the statement, its EL and strength of recommendation, and the percentage agreement of the global consensus group on the final version.

In the present document, the statements are accompanied by comments made by authors. In some areas the evidence is low, reflecting the lack of randomized trials and good quality studies. For some topics only the expert opinion was considered, where appropriate.

Analysis was performed by taking into account only those statements voted by all the participants.

STATEMENTS

Eighty participants voted all statements: 60 were Italian, 2 from the United Kingdom, 2 from Greece, 2 from Slovakia, 1 from Norway, and 3 from Romania, whereas 10 did not report own nationality.

About the main activity, 50 were gastroenterologists, 20 surgeons, 2 internists, 6 general practitioners, and 1 radiologist, whereas 1 did not report his/her main activity.

Table 1 resumes statement voted, with evidence of level and recommendation grade.

Definition and Epidemiology of DD

Statement [EL 1c-Grade of Recommendation (RG) B]:

“Diverticulosis” is merely the presence of colonic diverticula; these may become symptomatic or complicated.

Consensus levels of agreement: A + 58.97%; A 37.18%; A– 3.85%; D–, D, and D + 0.00%.

Statement (EL: 1c-RG: B)

Symptomatic uncomplicated diverticular disease (SUDD) is a syndrome characterized by recurrent abdominal symptoms (ie, abdominal pain and bloating resembling or overlapping irritable bowel syndrome symptoms) attributed to diverticula in the absence of macroscopically evident alterations other than the presence of diverticula.

Consensus levels of agreement: A + 50.63%; A 31.65%; A– 10.13%; D– 2.53%, D 5.06%; D + 0.00%.

Statement (EL: 4-RG: B)

Acute diverticulitis (AD) is an acute episode of severe, prolonged, lower abdominal pain (usually on the left side), change in bowel movements, low-grade fever, and leukocytosis. The clinical presentation has a broad spectrum ranging from mild self-limiting episodes to abscess, perforation, and peritonitis.

Consensus levels of agreement: A + 62.03%; A 29.11%; A– 8.86%; D–, D, and D + 0.00%.

Statement (EL: 2c-RG: B)

A small subset of patients with diverticulosis may develop segmental colitis associated with diverticulosis (SCAD).

Consensus levels of agreement: A + 25.64%; A 47.44%; A– 24.36%; D– 1.28%, D 1.28%; D + 0.00%.

Statement (EL: 2c-RG: B)

The prevalence of diverticulosis and DD is increasing in western countries in parallel with increased life expectancy.

Consensus levels of agreement: A + 44.16%; A 35.06%; A– 16.88%; D– 2.60%, D 0.00%; D + 1.30%.

Statement (EL: 2c-RG: B)

DD is a relevant cause of hospitalization and not devoid of mortality, particularly in elderly patients.

Consensus levels of agreement: A + 18.99%; A 39.24%; A– 25.32%; D– 7.59%, D 5.06%; D + 3.80%.

Statement (EL: 2c-RG: B)

During the last 10 to 20 years there has been an increasing rate of hospital admission for diverticulitis.

Consensus levels of agreement: A + 21.52%; A 45.57%; A– 20.25%; D– 1.27%, D 8.86%; D + 1.27%.

Statement (EL: 4-RG: B)

Mortality in perforated disease remains elevated, due to the high rate of relevant comorbidity.

Consensus levels of agreement: A + 16.46%; A 39.24%; A– 27.85%; D– 2.53%, D 11.39%; D + 2.53%.

Statement (EL: 1c-RG: B)

In general, DD has a favorable long-term outcome with a very low incidence of complications. Symptomatic disease, AD, and complicated DD represent distinct clinical entities among groups.

Consensus levels of agreement: A + 29.11%; A 45.57%; A– 15.19%; D– 3.80%, D 3.80%; D + 2.53%.

Comments

These statements are the same of the Italian Consensus Conference of the 2012³ about definitions and epidemiology except for the statement on the association between DD and colorectal cancer, which was excluded due to the very low quality of the current studies. Overall consensus about these statement is persisting very high, as all of them reached >80% agreement among respondents.

Diagnosis

Statement (EL: 1b-RG: B)

SCAD is a defined pathologic entity characterized by a chronic inflammatory response involving the interdiverticular mucosa of a colonic segment involved. The rectum and the right colon are spared from inflammation. Hence, SCAD can be considered as a separate pathologic entity.

Consensus levels of agreement: A + 26.92%; A 39.74%; A– 19.23%; D– 2.56%; D 10.26%; D + 1.28%.

Statement (EL 2a-RG: B)

Limitation of mucosal lesion to the diverticular segment is the most important diagnostic criterion for SCAD (rectal sparing). Rectal and descending colon biopsies are required to distinguish SCAD from inflammatory bowel disease.

Consensus levels of agreement: A + 35.90%; A 47.44%; A– 11.54%; D– 1.28%, D 3.85%; D + 0.00%.

Statement (EL: 2a-RG: B)

A prompt colonoscopy (ie, within 12 to 24 h) is mandatory for diagnosis and to direct therapy in diverticular bleeding. Massive bleeding should be managed with selective angiography.

Consensus levels of agreement: A + 29.49%; A 37.18%; A– 16.67%; D– 7.69%, D 8.97%; D + 0.00%.

TABLE 1. Statements Voted During the 2nd International Symposium on Diverticular Disease of the Colon

Statement Number	General Statements	Evidence Levels	Grade of Recommendation
1	Definitions and epidemiology		
1.1	“Diverticulosis” is merely the presence of colonic diverticula; these may become symptomatic or complicated	1c	B
1.2	Symptomatic uncomplicated diverticular disease (SUDD) is a syndrome characterized by recurrent abdominal symptoms (ie, abdominal pain and bloating resembling or overlapping irritable bowel syndrome symptoms) attributed to diverticula in the absence of macroscopically evident alterations other than the presence of diverticula	1c	B
1.3	AD is an acute episode of severe, prolonged, lower abdominal pain (usually on the left side), change in bowel movements, low-grade fever, and leukocytosis. The clinical presentation has a broad spectrum ranging from mild self-limiting episodes to abscess, perforation and peritonitis	4	B
1.4	A small subset of patients with diverticulosis may develop segmental colitis associated with diverticulosis (SCAD)	2c	B
1.5	The prevalence of diverticulosis and DD is increasing in western countries in parallel with increased life-expectancy	2c	B
1.6	DD is a relevant cause of hospitalization and not devoid of mortality, particularly in elderly patients	2c	B
1.7	During the last 10 to 20 years, there has been an increasing rate of hospital admission for diverticulitis	2c	B
1.8	Mortality in perforated disease remains elevated, due to the high rate of relevant comorbidity	4	B
1.9	In general, DD has a favorable long-term outcome with a very low incidence of complications. Symptomatic disease, AD and complicated DD represent distinct clinical entities among groups	1c	B
2	Diagnosis		
2.1	SCAD is a defined pathologic entity characterized by a chronic inflammatory response involving the interdiverticular mucosa of a colonic segment involved. The rectum and the right colon are spared from inflammation. Hence, SCAD can be considered a separate pathologic entity	1b	B
2.2	Limitation of mucosal lesion to the diverticular segment is the most important diagnostic criterion for SCAD (rectal sparing). Rectal and descending colon biopsies are required to distinguish SCAD from inflammatory bowel disease	2a	B
2.3	A prompt colonoscopy (ie, within 12 to 24 h) is mandatory for diagnosis and to direct therapy in diverticular bleeding.	2a	B
2.4	Massive bleeding should be managed with selective angiography Ultrasonography can be used as a sensitive and specific diagnostic technique to detect AD and its septic abdominal complications, provided that the procedure is carried out by an expert investigator	1b	A
2.5	Colonoscopy and computed tomographic colonography (CTC) must be considered the first-line test to diagnose or rule out colonic diverticula. The choice for CTC or colonoscopy depends on the patient’s age, risk factors, clinical status, and preference	3b	C
2.6	Diverticular Inflammation and Complication Assessment endoscopic classification seems to have a predictive value on the outcome of the disease	3b	C
2.7	Diagnostic accuracy of double-contrast barium enema for DD is similar to that of CTC. Use of double-contrast barium enema should be therefore no longer considered due to high x-rays dose	3a	B
2.8	Contrast-enhanced computerized tomography should be considered as the first-line colonic examination as it offers a more comprehensive evaluation of uncomplicated and complicated forms; contrast-enhanced computerized tomography can also be used to guide therapeutic interventions	1b	A
2.9	The use of magnetic resonance colonography in diagnosing AD is not sustained by robust data. Feasibility seems to be limited by the difficult access to magnetic resonance scanners in emergency departments	4	D
3	Medical treatment		
3.1	There is no rationale for drug treatment of asymptomatic diverticulosis, but there are limited indications to suggest an increase in dietary fiber	2b	B
3.2	There is a possible relationship between low-dietary fiber intake, particularly insoluble fiber, and the development of DD. A high daily fiber intake is recommended to reduce the risk of DD	2c	B
3.3	There is no rationale to avoid in the diet the consumption of nut, corn, and popcorn to prevent diverticular complications	2c	B
3.4	Regular treatment with aspirin or nonsteroidal anti-inflammatory drugs carries the potential risks of diverticular complications	2b	B
3.5	Fiber supplementation alone provides controversial results in terms of symptoms relief	2b	B
3.6	Fiber plus rifaximin provide a greater prevalence of symptom-free SUDD patients compared with fiber alone	2b	B
3.7	There is no clear evidence that rifaximin reduces acute episodes of diverticulitis	2b	C

TABLE 1. (continued)

Statement Number	General Statements	Evidence Levels	Grade of Recommendation
3.8	Mesalazine alone is effective in reducing symptoms in SUDD patients	2b	B
3.9	Mesalazine could be effective in reducing AD occurrence	2b	B
3.10	There is no clear evidence that mesalazine reduces acute episodes of diverticulitis	2b	C
3.11	There is some evidence that mesalazine reduces symptoms after acute episode of diverticulitis	2b	C
3.12	There is insufficient evidence that probiotics are effective in reducing symptoms	4	C
3.13	Management and treatment approaches to AD depend on severity (uncomplicated and complicated) and complexity (ie, abscess, fistula, etc.) of the condition	3b	C
3.14	Antibiotics may not improve outcome in acute uncomplicated diverticulitis and are used on a case-by-case basis	3b	C
3.15	In severe/complicated acute diverticulitis (AD), hospitalization, bowel rest, and broad-spectrum antibiotics are needed	3b	C
4	Surgical treatment		
4.1	The decision to perform elective resection after one or more episodes of AD should be undertaken on a "case-by-case" basis	3a	B
4.2	Elective surgery should be recommended in patients with symptomatic complicated DD (eg, fistula and stenosis). Specific clinical situations should be carefully evaluated (persisting symptoms and signs, age, degree of diverticulitis, and immunocompromised patients)	3a	B
4.3	Elective resection in a patient with an episode of AD is safer when performed in an inflammation-free interval	2a	B
4.4	Laparoscopic resection is safe and provides faster recovery in uncomplicated cases; it has to be performed by well-trained surgeons	2b	B
4.5	Several surgical options may be appropriate, but the choice mostly depends on the severity of peritonitis. Laparoscopic peritoneal lavage should be considered as an alternative to primary resection and anastomosis in purulent peritonitis	2b	B
4.6	The best treatment option for a diverticular abscess >4 cm in diameter is percutaneous-guided drainage. Diverticular abscesses not responding, or not amenable, to nonoperative management should be treated surgically	3b	C
4.7	Though technically feasible, laparoscopic resection for perforated diverticulitis has to be restricted to selected cases and to experienced laparoscopic surgeons	4	C
4.8	Current evidence is inadequate to support an urgent laparoscopic colorectal resection for perforated diverticulitis. This approach should be reserved to centers and surgeons with appropriate laparoscopic expertise	5	C

Statement (EL: 1b-RG: A)

Ultrasonography can be used as a sensitive and specific diagnostic technique to detect AD and its septic abdominal complications, provided that the procedure is carried out by an expert investigator.

Consensus levels of agreement: A + 32.91%; A 30.65%; A- 20.25%; D- 6.33%, D 8.86%; D + 0.00%.

Statement (EL: 3b-RG: C)

Colonoscopy and computed tomographic colonography (CTC) must be considered the first-line test to diagnose or rule out colonic diverticula. The choice for CTC or colonoscopy depends on the patient's age, risk factors, clinical status, and preference.

Consensus levels of agreement: A + 31.65%; A 37.97%; A- 21.52%; D- 3.80%, D 3.80%; D + 1.27%.

Statement (EL: 3b-RG: C)

Diverticular Inflammation and Complication Assessment endoscopic classification seems to have predictive role on the outcome of the disease.

Consensus levels of agreement: A + 22.08%; A 48.05%; A- 20.78%; D- 3.90%, D 2.60%; D + 2.60%.

Statement (EL: 3a-RG: B)

Diagnostic accuracy of double-contrast barium enema for DD is similar to that of CTC. Use of double-contrast

barium enema should be therefore no longer considered due to high x-rays dose.

Consensus levels of agreement: A + 20.25%; A 34.18%; A- 24.05%; D- 3.80%, D 6.33%; D + 11.89%.

Statement (EL: 1b-RG: A)

Contrast-enhanced computerized tomography should be considered as the first-line colonic examination as it offers a more comprehensive evaluation of uncomplicated and complicated forms; contrast-enhanced computerized tomography can also be used to guide therapeutic interventions

Consensus levels of agreement: A + 20.78%; A 40.26%; A- 10.39%; D- 2.60%, D 16.88%; D + 10.39%.

Statement (EL: 4-RG: D)

The use of magnetic resonance colonography in diagnosing AD is not sustained by robust data. Feasibility seems to be limited by the difficult access to magnetic resonance scanners in emergency departments.

Consensus levels of agreement: A + 24.68%; A 57.14%; A- 12.99%; D- 1.30%, D 3.90%; D + 0.00%.

Comments

These statements are the same of the Italian Consensus Conference of the 2012³ about diagnosis except for the

statement about the role of colonoscopy, which was excluded due to the appearance of the Diverticular Inflammation and Complication Assessment endoscopic classification in the 2015.⁷ It is described in the statement 2.6, taking into consideration the results of the large retrospective international study, which found this classification effective in predicting the outcome of the disease.⁸ Respondents was significantly agree with this new statement, which reached >90% agreement among respondents.

The overall consensus about these statement is good, as all of them reached >70% agreement among respondents.

Medical Treatment

Statement (EL: 2b-RG: B)

There is no rationale for drug treatment of asymptomatic diverticulosis, but there are limited indications to suggest an increase in dietary fiber.

Consensus levels of agreement: A + 22.08%; A 55.84%; A– 12.99%; D– 3.90%, D 5.19%; D + 0.00%.

Statement (EL: 2c-RG: B)

There is no rationale for drug treatment of asymptomatic diverticulosis, but there are limited indications to suggest an increase in dietary fiber.

Consensus levels of agreement: A + 14.29%; A 49.35%; A– 25.97%; D– 1.30%, D 7.79%; D + 1.30%.

Statement (EL: 2c-RG: B)

There is no rationale to avoid in the diet the consumption of nut, corn, and popcorn to prevent diverticular complications.

Consensus levels of agreement: A + 28.95%; A 52.63%; A– 7.89%; D– 3.95%, D 5.26%; D + 1.32%.

Statement (EL: 2b-RG: B)

Regular treatment with aspirin or nonsteroidal anti-inflammatory drugs carries the potential risks of diverticular complications.

Consensus levels of agreement: A + 28.57%; A 46.35%; A– 11.69%; D– 5.19%, D 5.19%; D + 2.60%.

Statement (EL: 2b-RG: B)

Fiber supplementation alone provides controversial results in terms of symptoms relief.

Consensus levels of agreement: A + 22.37%; A 47.37%; A– 18.42%; D– 3.95%, D 5.26%; D + 2.63%.

Statement (EL: 2b-RG: B)

Fiber plus rifaximin provide a greater prevalence of symptom-free SUDD patients compared with fiber alone.

Consensus levels of agreement: A + 27.27%; A 28.57%; A– 29.87%; D– 2.60%, D 9.09%; D + 2.60%.

Statement (EL: 2b-RG: C)

There is no clear evidence that rifaximin reduces acute episodes of diverticulitis.

Consensus levels of agreement: A + 15.79%; A 47.37%; A– 23.68%; D– 5.26%, D 7.89%; D + 0.00%.

Statement (EL: 2b-RG: B)

Mesalazine alone is effective in reducing symptoms in SUDD patients.

Consensus levels of agreement: A + 14.67%; A 26.67%; A– 37.33%; D– 6.67%, D 10.67%; D + 4.00%.

Statement (EL: 2b-RG: B)

Mesalazine could be effective in reducing AD occurrence.

Consensus levels of agreement: A + 10.67%; A 40.00%; A– 20.00%; D– 16.00%, D 12.00%; D + 1.33%.

Statement (EL: 2b-RG: C)

There is no clear evidence that mesalazine reduces acute episodes of diverticulitis.

Consensus levels of agreement: A + 9.33%; A 41.33%; A– 30.67%; D– 6.67%, D 9.33%; D + 2.67%.

Statement (EL: 2c-RG: C)

There is some evidence that mesalazine reduces symptoms after acute episode of diverticulitis.

Consensus levels of agreement: A + 6.67%; A 48.00%; A– 37.33%; D– 4.00%, D 4.00%; D + 0.00%.

Statement (EL: 4-RG: C)

There is insufficient evidence that probiotics are effective in reducing symptoms.

Consensus levels of agreement: A + 24.00%; A 34.67%; A– 25.33%; D– 5.33%, D 9.33%; D + 1.33%.

Statement (EL: 3b-RG: C)

Management and treatment approaches to AD depend on severity (uncomplicated and complicated) and complexity (ie, abscess, fistula, etc.) of the condition.

Consensus levels of agreement: A + 52.00%; A 41.33%; A– 5.33%; D– 0.00%, D 1.33%; D + 0.00%.

Statement (EL: 3b-RG: C)

Antibiotics may not improve outcome in acute uncomplicated diverticulitis and are used on a case-by-case basis.

Consensus levels of agreement: A + 10.67%; A 34.67%; A– 22.67%; D– 9.33%, D 13.33%; D + 9.33%.

Statement (EL: 3b-RG: C)

In severe/complicated AD, hospitalization, bowel rest, and broad-spectrum antibiotics are needed.

Consensus levels of agreement: A + 53.33%; A 33.33%; A– 5.33%; D– 0.00%, D 6.67%; D + 1.33%.

Comments

This section varies a lot when compared with the previous statements of the Italian Consensus Conference. In particular, statements 3.6 to 3.8 have been modified and statements 3.9 to 3.11 are new. This because new data and an in-depth literature analysis suggested to modify previous statements.^{9–18} Although agreement with statements provided was good, as all of them reached >70% agreement among respondents, statements describing drug use in the treatment of this population show an higher agreement variability, according to the wide debate on these treatments. However, respondents agreed about 3 main topics: 1. rifaximin and mesalazine are able to obtain symptom relief in SUDD; 2. mesalazine may be effective in preventing diverticulitis occurrence and in reducing symptoms after AD; 3. no current treatment seems to be effective in preventing diverticulitis recurrence at present.

Surgical Treatment

Statement (EL: 3a-RG: B)

The decision to perform elective resection after one or more episodes of AD should be undertaken on a “case-by-case” basis.

Consensus levels of agreement: A + 44.74%; A 46.05%; A– 6.58%; D– 0.00%, D 0.00%; D + 2.63%.

Statement (EL: 3a-RG: B)

Elective surgery should be recommended in patients with symptomatic complicated DD (eg, fistula and stenosis). Specific clinical situations should be carefully evaluated (persisting symptoms and signs, age, degree of diverticulitis, and immunocompromised patients).

Consensus levels of agreement: A + 41.56%; A 53.25%; A– 5.10%; D– 0.00%, D 0.00%; D + 0.00%.

Statement (EL: 2a-RG: B)

Elective resection in a patient with an episode of AD is safer when performed in an inflammation-free interval.

Consensus levels of agreement: A + 25.64%; A 58.97%; A– 5.13%; D– 0.00%, D 6.41%; D + 3.85%.

Statement (EL: 2b-RG: B)

Laparoscopic resection is safe and provides faster recovery in uncomplicated cases; it has to be performed by well-trained surgeons.

Consensus levels of agreement: A + 51.28%; A 43.59%; A– 6.41%; D– 0.00%, D 0.00%; D + 0.00%.

Statement (EL: 2b-RG: B)

Several surgical options may be appropriate, but the choice mostly depends on the severity of peritonitis.

Laparoscopic peritoneal lavage should be considered as an alternative to primary resection and anastomosis in purulent peritonitis.

Consensus levels of agreement: A + 16.67%; A 47.44%; A– 21.69%; D– 5.13%, D 7.69%; D + 1.28%.

Statement (EL: 3b-RG: C)

The best treatment option for a diverticular abscess > 4 cm in diameter is percutaneous-guided drainage.

Diverticular abscesses not responding, or not amenable, to nonoperative management should be treated surgically.

Consensus levels of agreement: A + 16.57%; A 57.69%; A– 16.67%; D– 5.13%, D 3.85%; D + 0.00%.

Statement (EL: 4-RG: C)

Though technically feasible, laparoscopic resection for perforated diverticulitis has to be restricted to selected cases and to experienced laparoscopic surgeons.

Consensus levels of agreement: A + 22.78%; A 62.03%; A– 8.86%; D– 1.27%, D 3.80%; D + 1.27%.

Statement (EL: 5-RG: C)

Current evidence is inadequate to support an urgent laparoscopic colorectal resection for perforated diverticulitis.

This approach should be reserved to centers and surgeons with appropriate laparoscopic expertise.

Consensus levels of agreement: A + 30.26%; A 47.37%; A– 13.16%; D– 0.00%, D 6.58%; D + 0.00%.

Comments

These statements are the same of the Italian Consensus Conference of the 2012³ about surgical management of the disease.

The overall consensus about these statement is good, as all of them reached >80% agreement among respondents.

CONCLUSIONS

These guidelines represent a consensus of best practice based on the available evidence as showed at the time of the 2nd International Symposium on Diverticular Disease. Their strength is that have been approved by a large population of physicians, involving all medical categories managing DD, and coming from several European countries.

They may not apply to all settings and should be interpreted in the light of specific clinical situations and resource availability. Further controlled clinical studies may be needed to clarify some aspects of these statements, and revision may be necessary as new data become available. This is particularly true not only for medical treatments, currently under active debate, but also for some surgical approaches.

They are not rules, but are intended to be an educational tool to provide information that may assist general practitioners, gastroenterologists, and surgeons in providing care to patients, not as encouraging, advocating, requiring, or discouraging any particular treatment.

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