NICE National Institute for Health and Care Excellence

NICE guideline

Diverticular disease: diagnosis and management

NICE guideline

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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

Overview

This guideline covers the diagnosis and management of diverticular disease in people aged 18 years and over. It aims to improve diagnosis and care and help people get timely information and advice, including advice about symptoms and when to seek help.

Who is it for?

- Healthcare professionals in primary and secondary care
- People with diverticular disease, their families and carers, and the public

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Diverticulosis

Management and advice

1.1.1 Tell people with diverticulosis that the condition is asymptomatic and no specific treatments are needed.

1.1.2 Advise people to eat a healthy, balanced diet including whole grains, fruit and vegetables. Tell them that:

- there is no need to avoid seeds, nuts, popcorn or fruit skins
- if they have constipation and a low-fibre diet, increasing their fibre intake gradually may minimise flatulence and bloating.

1.1.3 Advise people to drink adequate fluid if they are increasing their fibre intake, especially if there is a risk of dehydration.

1.1.4 Consider bulk-forming laxatives for people with constipation.

1.1.5 Tell people about the benefits of exercise, and weight loss if they are overweight or obese, and stopping smoking, in reducing the risk of developing acute diverticulitis and symptomatic disease.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on diverticulosis management and advice.

Full details of the evidence and the committee's discussion are in evidence review A: prevention of diverticular disease in patients with diverticulosis.

1.2 Diverticular disease

Symptoms and signs

1.2.1 Suspect diverticular disease if a person presents with one or both of the following:

- intermittent abdominal pain in the left lower quadrant with constipation, diarrhoea or occasional large rectal bleeds (the pain may be triggered by eating and relieved by the passage of stool or flatus)
- tenderness in the left lower quadrant on abdominal examination.

Be aware that:

- in a minority of people and in people of Asian origin, pain and tenderness may be localised in the right lower quadrant
- symptoms may overlap with conditions such as irritable bowel syndrome, colitis and malignancy.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on symptoms and signs of diverticular disease.

Full details of the evidence and the committee's discussion are in evidence review B: symptoms and signs of diverticular disease.

Investigations and referral

1.2.2 Do not routinely refer people with suspected diverticular disease unless:

- routine endoscopic and/or radiological investigations cannot be organised from primary care **or**
- colitis is suspected **or**
- the person meets the criteria for a suspected cancer pathway.

1.2.3 If the person meets the criteria for a suspected cancer pathway, refer by this route (see NICE's guideline on suspected cancer: recognition and referral).

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on investigations and referral.

Full details of the evidence and the committee's discussion are in evidence review C: diagnosis of diverticular disease.

Management and advice

1.2.4 Do not offer antibiotics to people with diverticular disease.

1.2.5 Advise people to avoid non-steroidal anti-inflammatory drugs and opioid analgesia if possible, because they may increase the risk of diverticular perforation.

1.2.6 For advice on diet, fluid intake, stopping smoking, weight loss and exercise, follow the recommendations in section 1.1 on diverticulosis.

1.2.7 Advise people that:

- the benefits of increasing dietary fibre may take several weeks to achieve
- if tolerated, a high-fibre diet should be maintained for life.

1.2.8 Consider bulk-forming laxatives if:

- a high-fibre diet is unacceptable to the person or it is not tolerated **or**
- the person has persistent constipation or diarrhoea.

1.2.9 Consider simple analgesia, for example paracetamol, as needed if the person has ongoing abdominal pain.

1.2.10 Consider an antispasmodic if the person has abdominal cramping.

1.2.11 If the person has persistent symptoms or symptoms that do not respond to treatment, think about alternative causes and investigate and manage appropriately.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on diverticulosis management and advice.

Full details of the evidence and the committee's discussion are in evidence review D: management of diverticular disease.

Recurrent diverticular disease

The committee were unable to make recommendations for practice in this area.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on recurrent diverticular disease.

Full details of the evidence and the committee's discussion are in evidence review evidence review E: management of recurrent diverticular disease.

1.3 Acute diverticulitis

Symptoms and signs of acute diverticulitis

1.3.1 Suspect acute diverticulitis if a person presents with constant abdominal pain, usually severe and localising in the left lower quadrant, with any of the following:

- fever **or**
- sudden change in bowel habit and significant rectal bleeding or passage of mucus from the rectum **or**
- tenderness in the left lower quadrant, a palpable abdominal mass or distention on abdominal examination, with a previous history of diverticulosis or diverticulitis.

  Be aware that in a minority of people and in people of Asian origin, pain and tenderness may be localised in the right lower quadrant.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on symptoms and signs of acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review evidence review F: referral criteria for acute diverticulitis.

Symptoms and signs of complicated acute diverticulitis

1.3.2 Suspect complicated acute diverticulitis and refer for same-day hospital assessment if the person has uncontrolled abdominal pain and any of the features in table 1.

Table 1 Symptoms and signs that suggest complicated acute diverticulitis

Symptom or sign	Possible complication
Abdominal mass on examination or peri-rectal fullness on digital rectal examination	Intra-abdominal abscess

Symptom or sign	Possible complication
Abdominal rigidity and guarding on examination	Bowel perforation and peritonitis
Altered mental state, raised respiratory rate, low systolic blood pressure, raised heart rate, low tympanic temperature, no urine output or skin discolouration	Sepsis (see the NICE guideline on suspected sepsis in people aged 16 or over)
Faecaluria, pneumaturia, pyuria or the passage of faeces through the vagina	Fistula into the bladder or vagina
Colicky abdominal pain, absolute constipation (passage of no flatus or stool), vomiting or abdominal distention	Intestinal obstruction

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on symptoms and signs of complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review I: indications for surgery.

Investigation of suspected acute diverticulitis

Primary care

1.3.3 For people with suspected uncomplicated acute diverticulitis who are not referred for same-day hospital assessment:

- reassess in primary care if their symptoms persist or worsen **and**
- consider referral to secondary care for further assessment.

Secondary care

1.3.4 For people with suspected complicated acute diverticulitis who have been referred for same-day hospital assessment, offer a full blood count, urea and

electrolytes test and C-reactive protein test.

1.3.5 If the person with suspected complicated acute diverticulitis has raised inflammatory markers, offer a contrast CT scan within 24 hours of hospital admission to confirm diagnosis and help plan management. If contrast CT is contraindicated, perform one of the following:

- a non-contrast CT **or**
- an MRI **or**
- an ultrasound scan, depending on local expertise.

1.3.6 If inflammatory markers are not raised, think about the possibility of alternative diagnoses.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on investigation of suspected acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review G: diagnostic tests for acute diverticulitis.

Non-surgical management of acute diverticulitis

1.3.7 For people with acute diverticulitis who are systemically well:

- consider a no antibiotic prescribing strategy
- offer simple analgesia, for example paracetamol
- advise the person to re-present if symptoms persist or worsen.

1.3.8 Offer an antibiotic prescribing strategy if the person with acute diverticulitis is systemically unwell, is immunosuppressed or has significant comorbidity.

1.3.9 Offer oral antibiotics if the person with acute diverticulitis is systemically unwell but does not meet the criteria for referral for suspected complicated acute

diverticulitis.

1.3.10 Offer intravenous antibiotics to people admitted to secondary care with suspected complicated acute diverticulitis.

For guidance on the management of suspected sepsis see NICE's guideline on suspected sepsis in people aged 16 or over.

1.3.11 Review intravenous antibiotics within 48 hours or after scanning if sooner (see recommendation 1.3.5) and consider stepping down to oral antibiotics where possible.

1.3.12 If the person has CT-confirmed uncomplicated acute diverticulitis, review the need for antibiotics and discharge them depending on any co-existing medical conditions.

1.3.13 When prescribing an antibiotic for suspected or confirmed acute diverticulitis, follow the advice in table 2.

Table 2 Antibiotics for adults aged 18 years and over with suspected or confirmed acute diverticulitis

Treatment	Antibiotic, dosage and course length
First-choice oral antibiotic for suspected or confirmed uncomplicated acute diverticulitis	**Co-amoxiclav**: 500/125 mg three times a day for 5 days

Treatment	Antibiotic, dosage and course length
Alternative first-choice oral antibiotics if penicillin allergy or co-amoxiclav unsuitable	**Cefalexin** (caution in penicillin allergy) **with metronidazole**: Cefalexin:500 mg twice or three times a day (up to 1 to 1.5 g three or four times a day for severe infection) for 5 days Metronidazole: 400 mg three times a day for 5 days **Trimethoprim with metronidazole**: Trimethoprim: 200 mg twice a day for 5 days Metronidazole: 400 mg three times a day for 5 days **Ciprofloxacin** (**only** if switching from IV ciprofloxacin with specialist advice) **with metronidazole**: Ciprofloxacin: 500 mg twice a day for 5 days Metronidazole: 400 mg three times a day for 5 days See the MHRA January 2024 advice for restrictions and precautions on using fluoroquinolone antibiotics because of the risk of disabling and potentially long-lasting or irreversible side effects. Fluoroquinolones must now only be prescribed when other commonly recommended antibiotics are inappropriate

Treatment	Antibiotic, dosage and course length
First-choice intravenous antibiotics for suspected or confirmed complicated acute diverticulitis	**Co-amoxiclav**: 1.2 g three times a day **Cefuroxime with metronidazole**: Cefuroxime:750 mg three or four times a day (increased to 1.5 g three or four times a day if severe infection) Metronidazole: 500 mg three times a day **Amoxicillin with gentamicin and metronidazole**: Amoxicillin: 500 mg three times a day (increased to 1 g four times a day if severe infection) Gentamicin: Initially 5 to 7 mg/kg once a day, subsequent doses adjusted according to serum gentamicin concentration.Therapeutic drug monitoring and assessment of renal function is required (see the BNF information on gentamicin) Metronidazole: 500 mg three times a day **Ciprofloxacin** (**only** in people with allergy to penicillins and cephalosporins) **with metronidazole**: Ciprofloxacin: 400 mg twice or three times a day Metronidazole: 500 mg three times a day See the MHRA January 2024 advice for restrictions and precautions on using fluoroquinolone antibiotics because of the risk of disabling and potentially long-lasting or irreversible side effects. Fluoroquinolones must now only be prescribed when other commonly recommended antibiotics are inappropriate
Alternative intravenous antibiotics	Consult local microbiologist

See BNF for appropriate use and dosing in specific populations, for example, hepatic impairment, renal impairment, pregnancy and breastfeeding, and administering intravenous (or, where appropriate, intramuscular) antibiotics.

Longer courses may be needed based on clinical assessment. Continue antibiotics for up to 14 days in people with CT-confirmed diverticular abscess.

Review intravenous antibiotics within 48 hours or after scanning if sooner and consider stepping down to oral antibiotics where possible.

Emergency management of complicated acute diverticulitis

1.3.14 When prescribing an antibiotic for suspected or confirmed complicated acute diverticulitis, follow the advice in table 2.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on the non-surgical management of acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review H: non-surgical management of acute diverticulitis.

Management of abscesses

1.3.15 For people presenting in secondary care with complicated acute diverticulitis and suspected diverticular abscess, assess and manage in line with NICE's guideline on suspected sepsis in people aged 16 or over.

1.3.16 Offer intravenous antibiotics to people with acute diverticulitis and suspected diverticular abscess.

1.3.17 When prescribing an antibiotic for diverticular abscess, follow the advice in table 2.

1.3.18 Offer a contrast CT scan to people with acute diverticulitis and suspected diverticular abscess. If contrast CT is contraindicated, perform one of the following:

- a non-contrast CT **or**
- an MRI **or**
- an ultrasound scan, depending on local expertise.

1.3.19 Review intravenous antibiotics within 48 hours or after scanning if sooner and consider stepping down to oral antibiotics where possible.

1.3.20 Use the scan results to guide treatment based on the size and location of the abscess.

1.3.21 If a person does not have confirmed diverticular abscess, review their need for antibiotics.

1.3.22 Consider either percutaneous drainage (if anatomically feasible) or surgery (see recommendation 1.3.27) for abscesses greater than 3 cm.

1.3.23 Send samples of pus from the abscess (if it has been drained) to the microbiology laboratory to enable antibiotic treatment to be tailored to sensitivities.

1.3.24 For abscesses less than 3 cm switch to oral antibiotics where possible.

1.3.25 In people with a CT-confirmed diverticular abscess, if the condition does not improve clinically or there is deterioration, consider re-imaging to inform the management strategy.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on the management of abscesses in complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review N: percutaneous drainage versus resectional surgery for the management of abscesses.

Management of bowel perforations

1.3.26 Offer either laparoscopic lavage or resectional surgery (see recommendation 1.3.27) to people with diverticular perforation with generalised peritonitis after discussing the risks and benefits of the 2 options with them (see table 3). If faecal peritonitis is identified intraoperatively, proceed to resectional surgery.

Table 3 Factors to take into account when deciding whether to have lavage or resection for diverticular perforation with generalised peritonitis

Factor	Laparoscopic lavage	Resectional surgery
What the procedure involves	In diverticulitis this involves washing the abdominal cavity and colon using keyhole surgery	The surgical removal of the diseased colon followed by either reattaching the remaining segments of the colon or forming an end stoma
Effect on quality of life	There was no significant difference in quality of life scores reported for lavage and surgery	There was no significant difference in quality of life scores reported for lavage and surgery
Mortality	Although there was some benefit seen in mortality for lavage, this evidence was very uncertain	Although there was some benefit seen in mortality for lavage, this evidence was very uncertain
Needing a stoma (where the bowel is connected surgically to an opening in the abdomen and stools are collected in a bag or pouch)	A stoma is not needed	A stoma may be needed
Pain	Less likely to relieve pain than resectional surgery	More likely to relieve pain than lavage because the damaged bowel has been removed
Recurrent diverticulitis	Fewer people had recurrent diverticulitis after surgery than after lavage because the diseased bowel is removed. However, the evidence was very uncertain	Fewer people had recurrent diverticulitis after surgery than after lavage because the diseased bowel is removed. However, the evidence was very uncertain

Factor	Laparoscopic lavage	Resectional surgery
Needing more operations	Evidence comparing unplanned surgery with lavage showed that fewer people needed reoperations after surgery than after lavage Evidence that included unplanned surgery and planned surgery (scheduled stoma reversal after resectional surgery) showed that fewer people needed reoperations after lavage However, in both cases the evidence was very uncertain	Evidence comparing unplanned surgery with lavage showed that fewer people needed reoperations after surgery than after lavage Evidence that included unplanned surgery and planned surgery (scheduled stoma reversal after resectional surgery) showed that fewer people needed reoperations after lavage However, in both cases the evidence was very uncertain
Postoperative complications	There was no meaningful difference in the number of infections or in the need for further intervention between lavage and surgery. People who had surgery had a greater reduction in post-surgical abscesses than those who had lavage, but this evidence was of low quality	There was no meaningful difference in the number of infections or in the need for further intervention between lavage and surgery. People who had surgery had a greater reduction in post-surgical abscesses than those who had lavage, but this evidence was of low quality

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on the management of bowel perforations in complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review O: laparoscopic lavage for the management of bowel perforations.

Anastomosis and bowel resection for people with complicated acute diverticulitis (elective and emergency surgery)

1.3.27 Offer people with complicated acute diverticulitis who are having surgery (either

elective or emergency):

- primary anastomosis (join in the bowel) with or without diverting stoma **or**
- Hartmann's procedure (resection of the bowel with an end stoma).

Take into account the person's age, any other conditions they have and how well they can carry out everyday activities (WHO performance status).

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on anastomosis for people with complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review M: primary versus secondary anastomosis (timing of anastomosis) in complicated acute diverticulitis.

1.3.28 In people undergoing bowel resection, consider resecting back to the compliant bowel (that is, bowel that is soft, unthickened and unaffected by inflammation).

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on bowel resection for people with complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review L: management of complicated acute diverticulitis – extent of colectomy.

Elective surgical management after resolution of complicated acute diverticulitis

1.3.29 Consider open or laparoscopic resection for elective surgery for people who have recovered from complicated acute diverticulitis but have continuing symptoms, for example in people with stricture or fistula.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on elective surgical management after resolution of complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review K: laparoscopic versus open sigmoid resection for acute diverticulitis.

Timing of surgery for complicated acute diverticulitis

The committee were unable to make recommendations for practice in this area. They made a recommendation for research on timing of surgery for complicated acute diverticulosis.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on timing of surgery for complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review J: timing of surgery for complicated acute diverticulitis.

Management of recurrent acute diverticulitis

1.3.30 Do not offer an aminosalicylate or antibiotics to prevent recurrent acute diverticulitis.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on the management of recurrent acute diverticultitis.

Full details of the evidence and the committee's discussion are in evidence review P: management of recurrent acute diverticulitis.

1.4 Information

Diverticulosis

1.4.1 Give people with diverticulosis, and their families and carers where appropriate, verbal and written information on:

- diet and lifestyle
- the course of diverticulosis and the likelihood of progression
- symptoms that indicate complications or progression to diverticular disease.

Diverticular disease

1.4.2 Give people with diverticular disease, and their families and carers where appropriate, verbal and written information on:

- diet and lifestyle
- the course of diverticular disease and the likelihood of progression
- symptoms and symptom management
- when to seek medical advice.

Acute diverticulitis

1.4.3 Give people with acute diverticulitis, and their families and carers where appropriate, verbal and written information on:

- diet and lifestyle
- the course of acute diverticulitis and likelihood of complicated disease or recurrent episodes
- symptoms

- when and how to seek further medical advice
- possible investigations and treatments
- risks of interventions and treatments, including antibiotic resistance, and how invasive these are
- role of surgery and outcomes (postoperative bowel function and symptoms).

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on information for people with diverticulosis, diverticular disease and acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review Q: information and support.

Terms used in this guideline

Acute diverticulitis

Sudden inflammation or infection associated with diverticula. Symptoms include constant abdominal pain, usually severe and localising in the left lower quadrant. Other features, including fever, may also be present.

Colitis

Inflammation of the bowel related to Crohn's disease, ulcerative colitis, ischaemia or microscopic colitis. Symptoms may include abdominal pain and change in bowel habits with passage of blood.

Complicated acute diverticulitis

The presence of complications associated with inflamed or infected diverticula. These complications may include abscess, fistula, stricture perforation and sepsis.

Diverticular disease

The presence of diverticula with mild abdominal pain or tenderness and no systemic symptoms.

Diverticulosis

The presence of diverticula without symptoms.

Recommendations for research

The guideline committee has made the following recommendations for research.

Key recommendations for research

1 Non-surgical management of acute diverticulitis

What is the clinical and cost effectiveness of antibiotics for the management of acute diverticulitis in primary care?

For a short explanation of why the committee made this recommendation for research and how it might affect practice, see the rationale section on non-surgical management of acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review H: non-surgical management of acute diverticulitis.

2 Conservative management for preventing diverticular disease

What is the most clinically and cost-effective conservative management for preventing diverticular disease in people with diverticulosis?

For a short explanation of why the committee made this recommendation for research and how it might affect practice, see the rationale section on diverticulosis management and advice.

Full details of the evidence and the committee's discussion are in evidence review A: prevention of diverticular disease in patients with diverticulosis.

3 Managing diverticular disease

What is the most clinically and cost-effective treatment for diverticular disease?

For a short explanation of why the committee made this recommendation for research and how it might affect practice, see the rationale section on management and advice for people with diverticular disease.

Full details of the evidence and the committee's discussion are in evidence review D: management of diverticular disease.

4 Information and support

What information and support do people with diverticulosis, diverticular disease or acute diverticulitis need?

For a short explanation of why the committee made this recommendation for research and how it might affect practice, see the rationale section on information for people with diverticulosis, diverticular disease and acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review Q: information and support.

5 Timing of surgery for complicated acute diverticulitis

What are the clinically and cost-effective surgical approaches to managing complicated acute diverticulitis, including timing of surgery (elective or emergency)?

For a short explanation of why the committee made this recommendation for research and how it might affect practice, see the rationale section on timing of surgery for complicated acute diverticulitis.

Full details of the evidence and the committee's discussion are in evidence review J: timing of surgery for complicated acute diverticulitis.

Other recommendations for research

6 Risk factors for diverticular disease for people with diverticulosis

What are the risk factors for diverticulosis progressing to diverticular disease?

Rationale and impact

These sections briefly explain why the committee made the recommendations and how they might affect practice. They link to details of the evidence and a full description of the committee's discussion.

Diverticulosis management and advice

Recommendations 1.1.1 to 1.1.5

Why the committee made the recommendations

Diverticulosis is asymptomatic and there are no specific treatments for it. The committee therefore considered making a recommendation about lifestyle and dietary advice to address the common questions asked by newly diagnosed patients on preventing disease progression. However, although some evidence was found on the management of diverticulosis, it did not meet the criteria for inclusion in the review on what is the most clinically and cost-effective management strategy for preventing diverticular disease in people with diverticulosis.

The committee were aware of evidence (which did not meet the review criteria) that vigorous exercise was associated with a reduction in the risk of developing acute diverticulitis. Increased body mass index was also associated with an increased risk of symptomatic disease. In the absence of evidence that could be used to draft recommendations, formal consensus methods and the knowledge and experience of the committee were used instead. The recommendations should be straightforward to implement and may reduce the possibility of developing diverticular disease.

In light of the lack of evidence on this topic, and the need to know what factors might increase the risk of diverticulosis progressing to diverticular disease, the committee considered this an important area for research. They made recommendations for research on risk factors for diverticular disease and on conservative management for preventing diverticular disease.

How the recommendations might affect practice

The recommendations reflect current practice.

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Symptoms and signs of diverticular disease

Recommendation 1.2.1

Why the committee made the recommendation

The evidence on symptoms and signs comprised a single study with no clinically important outcomes and was based on a population with diverticulitis rather than diverticular disease. Because of a lack of evidence, recommendations were made using formal consensus methods and the knowledge and expertise of the committee on the most common presentation of diverticular disease.

Most people experience pain on the left side of the abdomen where the diverticula most often occur in the sigmoid colon. For this reason people are often tender in the left lower quadrant. However, it was important to highlight that people of Asian origin may experience right-sided symptoms. Other symptoms are variable but people experience constipation, diarrhoea or both, with occasional rectal bleeds. The symptoms alone are not specific enough to indicate diverticular disease but should be considered in conjunction with intermittent abdominal pain. Symptoms may overlap with conditions such as irritable bowel syndrome, colitis and malignancy.

How the recommendation might affect practice

The recommendation reflects current practice.

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Investigations and referral for diverticular disease

Recommendations 1.2.2 to 1.2.3

Why the committee made the recommendations

There was no evidence on diagnosing diverticular disease so the guideline committee made recommendations based on their knowledge of current best practice. Where diverticular disease is suspected, current practice is to use imaging or endoscopy to confirm the presence of diverticula or exclude other diseases such as cancer. Patients will often have their bowel investigated by either endoscopy with a flexible sigmoidoscopy or colonoscopy or CT colonography. The committee agreed that these routine endoscopic and radiological investigations can sometimes be organised from primary care but that referral would be needed if this was not available.

How the recommendations might affect practice

The recommendations reflect current practice.

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Management and advice for people with diverticular disease

Recommendations 1.2.4 to 1.2.11

Why the committee made the recommendations

Very limited evidence was identified on a high fibre diet, antibiotics, aminosalicylates, probiotics, symbiotics and laxatives and there was no evidence on non-steroidal anti-inflammatory drugs (NSAIDs). The evidence that was available didn't help the committee to understand the impact of these interventions on the progression of disease or people's quality of life. The committee used formal consensus methods together with their expertise and knowledge to make recommendations on diet and lifestyle advice and how to manage pain and cramping.

Bulk-forming laxatives are effective as they help to soften the stool and can also help to solidify loose stools in people with constipation. Paracetamol is indicated for pain and the committee highlighted the importance of avoiding NSAIDs and opioid analgesia because of the risk of diverticular perforation. Some people experience abdominal cramping, and anti-spasmodics may help with this.

In line with best practice in antimicrobial stewardship, the committee made a recommendation not to use antibiotics in the absence of acute diverticulitis.

Having a greater understanding of how best to manage symptoms and prevent the disease developing into acute diverticular disease could have a positive impact on a person's health and wellbeing. It could also help avoid potential subsequent treatment costs. The committee therefore made a recommendation for research on management and advice for people with diverticular disease .

These recommendations are about managing the symptoms of diverticular disease rather than preventing progression to acute diverticulitis. However, the development of acute diverticulitis was included as an outcome in this review and in the recommendation for research that was developed, because the committee considered it to be a critical factor for decision making. The committee noted the importance of considering alternative causes and further investigations in people with persistent symptoms or who do not respond to treatment.

How the recommendations might affect practice

The recommendations reflect current practice.

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Recurrent diverticular disease

Why the committee did not make any recommendations

There was no evidence included for this review and the committee were unable to make any recommendations based on their experience or opinion.

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Symptoms and signs of acute diverticulitis

Recommendation 1.3.1

Why the committee made the recommendation

There was no relevant evidence on the symptoms and signs of acute diverticulitis, so recommendations were made using formal consensus methods. The committee thought that clearly defining the symptoms and signs of acute diverticulitis, along with its associated complications, would help clinicians and patients in clearly differentiating these distinct clinical conditions.

Committee members thought that diverticular disease, symptomatic diverticular disease and acute diverticulitis are often used interchangeably, creating confusion about which condition the patient has and therefore what management is appropriate. The recommendation is focused on symptoms and signs that are specific to acute diverticulitis. It is aimed at primary care to support the identification of the condition.

How the recommendation might affect practice

The recommendation reflects current practice.

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Symptoms and signs of complicated acute diverticulitis

Recommendation 1.3.2

Why the committee made the recommendation

There was no relevant evidence on the symptoms and signs of complicated acute diverticulitis, so a recommendation was made using formal consensus methods. The recommendation focuses on symptoms and signs that differentiate uncomplicated from complicated acute diverticulitis. If any of these symptoms and signs are present, same-day hospital assessment is necessary.

How the recommendation might affect practice

The recommendation reflects current practice.

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Investigation of suspected acute diverticulitis

Recommendations 1.3.3 to 1.3.6

Why the committee made the recommendations

There was insufficient evidence available on diagnostic tests for people who are not referred for same-day hospital assessment. The committee highlighted the importance of reassessment or referral if the person's symptoms persist or worsen, as this could indicate complicated acute diverticulitis or an alternative diagnosis.

For people with suspected complications of acute diverticulitis referred for urgent same-day hospital assessment, the committee agreed that less costly clinical tests of full blood count and C-reactive protein (CRP) should be offered initially to identify inflammation. The urea and electrolytes test assesses kidney function, which will help to determine if a contrast CT can be performed. The CT could inform the decision making and help decide which patients should undergo further investigation for acute diverticulitis.

The committee acknowledged that contrast CT is recognised as the gold standard diagnostic test for acute diverticulitis and its complications. They agreed that having an early CT scan to assess for acute diverticulitis would mean that complications could be identified sooner. This would subsequently reduce length of hospital stay and the number of later colonoscopies. In addition, having the scan within 24 hours of admission would also help guide treatment planning. For example, it could identify people with uncomplicated diverticular disease who can be given oral antibiotics and discharged or have antibiotics stopped and be discharged.

Where contrast CT is contraindicated, the committee agreed that non-contrast CT, MRI or ultrasound are accepted alternatives to contrast CT. The choice of whether to perform ultrasound should depend on the availability of local expertise. Ultrasound may not be able to diagnose diverticulitis in isolation, but it may identify factors such as colonic wall thickening and inflammation. Ultrasound may be used as an adjunct to rule out other disease.

There was no evidence for colonoscopy and sigmoidoscopy in diagnosing acute diverticulitis. The committee were aware of the risk of perforation and agreed that these

procedures should not be offered for acute diverticulitis.

How the recommendations might affect practice

Full blood count and CRP are routinely used to assess for inflammation and indication of acute diverticulitis. This reflects current best practice but is not used across all NHS settings. Therefore implementing this recommendation will mean a change in practice for some providers.

Currently, 60% of people with acute diverticulitis undergo CT examination to confirm the diagnosis. This recommendation will increase the use of CT scanning. However, the increase in cost associated with this will be offset by a decrease in hospital stays, along with a decrease in use of intravenous antibiotics and potentially further endoscopy. Evidence shows that performing a CT can reduce the use of subsequent endoscopy.

Return to recommendations

Non-surgical management of acute diverticulitis

Recommendations 1.3.7 to 1.3.14

Why the committee made the recommendations

For people with suspected acute diverticulitis who are not referred for urgent same-day hospital assessment, the committee agreed that watchful waiting is an option if the person is systemically well and has no comorbidities that increase the risk of infection. This decision would be in the context of shared decision making. Simple analgesia and advice can be offered. Oral antibiotics are appropriate if the person is systemically unwell but does not meet the criteria for referral with suspected complicated acute diverticulitis.

The evidence supports current practice of treating an acute episode of diverticulitis with intravenous antibiotics in secondary care. If CT confirms uncomplicated acute diverticulitis, switching to oral antibiotics does not affect outcomes. The committee recommended antibiotics for this group because they were aware of evidence that watchful waiting could increase recurrence rates and the probability of further surgery. In support of antibiotic stewardship and to avoid antibiotic resistance the committee recommended that the person should be reassessed if necessary and the need for

antibiotic treatment should be reviewed.

The need for intravenous antibiotics should be reviewed, including whether to stop them, within 48 hours in line with current good practice on antibiotic prescribing or after the CT scan. The CT will confirm if the person has an abscess or not. The total course of antibiotic treatment should be for a maximum of 5 days and then reviewed. The duration may need to be longer in people with diverticular abscess. The duration of antibiotics used in the studies was variable and 5 days was based on current clinical practice and the knowledge and expertise of the committee.

In light of the lack of evidence on this topic, and the need to prevent antibiotic resistance, the committee considered this an important area for research. It made a recommendation for research on antibiotics for people with acute diverticulitis managed in primary care.

How the recommendations might affect practice

The recommendation to offer an initial treatment of intravenous antibiotics before CT scanning for confirmation reflects current practice, so there should be no change in practice. Using oral antibiotics beyond this point in place of intravenous antibiotics may reduce the resource requirement in caring for people with acute diverticulitis.

Return to recommendations

Management of abscesses in complicated acute diverticulitis

Recommendations 1.3.15 to 1.3.25

Why the committee made the recommendations

The quality of the evidence for this topic meant that it was not possible to demonstrate greater effectiveness of one intervention over another. The results showed harms as well as benefits of treatment. The committee therefore made recommendations based on their clinical expertise and the approaches taken in the studies. The committee highlighted the risk of sepsis and agreed that it is important to refer people with suspected diverticular abscess to secondary care for same-day assessment and treatment with intravenous antibiotics in line with the NICE guideline on suspected sepsis in people aged 16 or over.

The committee considered this to be standard practice.

The need for intravenous antibiotics should be reviewed within 48 hours in line with current good practice on antibiotic prescribing or after the CT scan. The CT will confirm if the person has an abscess or not.

The committee agreed that offering a CT scan to people with suspected diverticular abscess may help to determine the most appropriate treatment for each person based on the characteristics of the abscesses, such as size and location. This was based on clinical experience and the fact that most of the included studies used CT scans to confirm and assess abscesses. Non-contrast CT, MRI or ultrasound (depending on local expertise) should be offered if contrast CT is contraindicated.

The committee also decided that only abscesses greater than 3 cm should be considered for percutaneous drainage because of technical difficulties in performing this procedure on smaller abscesses. This was based on clinical expertise and was the approach taken by most of the included studies.

The committee agreed that if percutaneous drainage is an anatomically feasible option this could be considered alongside a discussion with the patient about the risks and benefits of surgery. In people with a CT-confirmed diverticular abscess, re-imaging may be considered if the condition does not improve clinically of if there is deterioration. This will guide the management strategy – for example, if further surgery is needed or if a previous collection that was not drainable percutaneously (for example because it was too small) is now drainable.

How the recommendations might affect practice

The recommendations reflect current practice.

Return to recommendations

Management of bowel perforations in complicated acute diverticulitis

Recommendation 1.3.26

Why the committee made the recommendation

The committee noted that, based on the evidence, there appeared to be few differences between resection of the bowel and lavage in terms of patient outcomes. The committee agreed that for people with diverticular perforations with generalised peritonitis, both options should be discussed and a decision made based on patient preferences. A patient decision table has been developed to support this discussion.

No evidence was found for the treatment of faecal peritonitis (also known as Hinchey stage IV perforation). But the committee agreed that resection of the bowel is better than lavage because it is the only way to prevent further faecal contamination of the peritoneal cavity.This is because of the more serious nature of this condition indicated by the presence of faeces in the peritoneal cavity.

How the recommendation might affect practice

The committee considered that lavage is not commonly used in the UK for treating diverticular perforation. Implementing this recommendation may therefore require a change from current practice by the majority of providers.

Return to recommendations

Anastomosis for people with complicated acute diverticulitis

Recommendation 1.3.27

Why the committee made the recommendation

The committee agreed that there was too much uncertainty surrounding most of the evidence to recommend one intervention over the other for complicated acute diverticulitis. Very few outcomes indicated a clinical benefit of either primary anastomosis or temporary stoma. For this reason, the committee concluded that both primary anastomosis (which is a join in the bowel, with or without diverting stoma) and Hartmann's procedure should be options for people admitted to surgery for this condition. Based on the expertise and knowledge of the committee, surgeon experience, the patient's age, any other conditions the patient has and how well they can carry out everyday activities and

patient condition should be considered.

In the emergency setting frail patients with multiple medical problems who have sepsis at the time of surgery may benefit from a Hartmann's procedure instead of a primary anastomosis (with or without diverting stoma) as this removes the risk of a subsequent anastomotic leak. However, the committee recognised that patients having a stoma in this setting often find these are permanent and not reversed.

How the recommendation might affect practice

The recommendation reflects current practice.

Return to recommendations

Bowel resection for people with complicated acute diverticulitis

Recommendation 1.3.28

Why the committee made the recommendation

No evidence was found on the extent of bowel resection for people with acute diverticulitis. A recommendation was developed based on the experience of the surgeons on the committee. Committee members discussed the difference between resecting back to normal bowel and resecting back to compliant bowel. The committee agreed that 'normal bowel' could be interpreted by some as bowel without diverticula, rather than bowel that is soft, unthickened and unaffected by inflammation. To avoid this confusion, resecting back to the compliant bowel, which refers to bowel that is functional and is not restricted in terms of movement, was included in the recommendation and reflects the current advice by national bodies.

How the recommendation might affect practice

The recommendation reflects current practice.

Return to recommendations

Elective surgical management after resolution of complicated acute diverticulitis

Recommendation 1.3.29

Why the committee made the recommendation

The committee concluded that there was insufficient evidence to say whether laparoscopic resection or open resection was the better management option for people who have recovered from complicated acute diverticulitis but who have continuing symptoms.

How the recommendation might affect practice

The recommendation reflects current practice.

Return to recommendations

Timing of surgery for complicated acute diverticulitis

Why the committee did not make any recommendations

In the studies in the evidence reviewed people were offered an intervention based on demographic and clinical characteristics. This meant it was difficult to assess the true effect of interventions on patient outcomes. Therefore the committee decided not to make any practice recommendations.

The committee thought this was an area that needed further research and therefore developed a recommendation for research on timing of surgery for complicated acute diverticulitis.

Return to recommendations

Management of recurrent acute diverticulitis

Recommendation 1.3.30

Why the committee made the recommendation

The committee noted that the evidence supported current practice of not using an aminosalicylate in managing recurrent diverticulitis. Aminosalicylates are not licensed to treat diverticulitis in the UK and there is little evidence to support their use in this area.

The committee agreed that there was insufficient evidence to support the use of antibiotics to prevent recurrent diverticular disease. In support of antibiotic stewardship and to avoid antibiotic resistance the committee recommended not offering antibiotic treatment.

How the recommendation might affect practice

The recommendation to not offer an aminosalicylate or antibiotics for the prevention of recurrent diverticulitis reflects current practice. Therefore the committee agreed there should be no change in practice.

Return to recommendations

Information

Recommendations 1.4.1 to 1.4.3

Why the committee made the recommendations

There was limited evidence on the support and information needed for people with diverticulosis, diverticular disease and diverticulitis and their families and carers. The evidence was from a symptom-based questionnaire and reported on the timing and success of surgery and symptoms. The committee agreed that it is important for those affected to have relevant information on these topics, but also used its knowledge and experience to expand on these topics in the recommendations.

The committee decided that given the limited evidence, this is an area that needs further

research to identify the type of information people want. Therefore they made a recommendation for research on information for people with diverticulosis, diverticular disease or acute diverticulitis.

How the recommendations might affect practice

The recommendation reflects current practice.

Return to recommendations

Context

Diverticulosis is a digestive condition characterised by small pouches (diverticula) that protrude from the walls of the large intestine.

The true prevalence of diverticulosis is difficult to determine because most patients are asymptomatic. It is age dependent and relatively uncommon in people aged under 40, although in recent years there has been a dramatic rise in the prevalence in this age group. In people aged over 65 the prevalence is up to 65%.

About 80 to 85% of people affected by diverticulosis remain asymptomatic, and 10 to 15% develop symptomatic diverticular disease including acute diverticulitis and its complications (perforation, abscess formation, haemorrhage, fistula and obstruction).

Key aspects of this guideline include the management of diverticulosis, diagnosis and management of diverticular disease, acute diverticulitis and complicated acute diverticulitis

Areas of the guideline with the potential for the greatest impact on practice include CT scanning for acute diverticulitis and offering resection or lavage for bowel perforations.

Finding more information and committee details

To find out what NICE has said on topics related to this guideline, see the NICE topic page on digestive tract conditions.

For full details of the evidence and the guideline committee's discussions, see the evidence reviews and full guideline. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting NICE guidelines into practice, see resources to help you put guidance into practice.

Update information

Minor changes since publication

November 2025: We updated links throughout to the NICE guideline on suspected sepsis in people aged 16 or over, which partially replaces the previous NICE guideline on suspected sepsis.

September 2024: We updated table 2 to reflect the new safety advice on fluoroquinolones.

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