MICROSCOPIC COLITIS

MADE CLEAR

LIFE WITH MC

Frequently Asked Questions

For Healthcare Professionals

Background

Treatment

Life with MC

1 What is MC?

2 What causes MC?

3 Who is affected by MC?

4 How is MC diagnosed?

5 Are there different types of MC?

6 How is MC different to IBS and IBD?

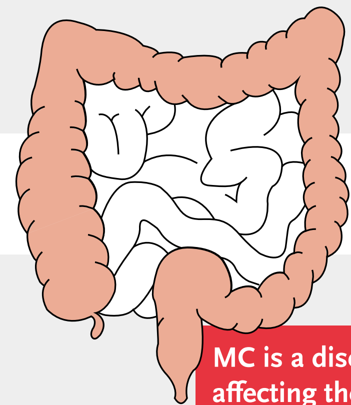
What is MC?

Key Facts for Patients

Microscopic colitis (or MC for short) is an ongoing disease where inflammation in your bowel causes watery diarrhoea.[1] It gets its name because of the part of the large intestine affected (the colon), and because it can only be seen under a microscope.[2]

Following digestion and absorption in the small intestine, the undigested waste moves through your colon. The colon absorbs around 1.4 litres or two and a half pints of fluid from your waste daily, so that when you go to the toilet, your poo is nearly solid.[3]

If you've got MC, the cells lining your colon can't absorb fluid very well.[1] Because this water has nowhere to go, it passes out as watery diarrhoea.[2] Because this can happen as many as or even over 9 times a day, it can really impact everyday life.[4,5]



MC is a disease affecting the large intestine

Key Facts for Healthcare Professionals

Microscopic Colitis (MC) is a chronic inflammatory disease of the colon characterised by watery diarrhoea.[1] It gets its name because it can only be diagnosed by viewing colonic biopsies under a microscope.[2]

When undigested food waste enters the colon it contains around 1.5 of these litres of fluid, daily.[3] The colon is responsible for absorbing about 1.4 litres (equivalent to two and a half pints) to give stool a normal semi-solid consistency.[3]

However, in MC changes to the colonic mucosa impair its water absorption function. This results in the main symptom of MC — recurrent, non-bloody diarrhoea.[2] Patients can find the watery diarrhoea debilitating and stool frequency can be up to 9 stools per day, with severe cases exceeding this.[4,5] The impact can mean people with MC cannot carry on with normal activities, including feeling they cannot leave the house.

What causes MC?

Key Facts for Patients

It's not exactly clear what causes MC but there are some things which can make it more likely to occur.

One thing that can increase the risk of MC is having another disease, such as rheumatoid arthritis, type 1 diabetes and coeliac disease.[6] Normally your gut contains good bacteria for healthy digestion. If you've had an infection in your gut before, you could develop MC because of changes in your gut bacteria.[7]

Some medicines for stomach ulcers and inflammation have been linked to MC.[7] Although these drugs may not cause MC directly, they can worsen diarrhoea which may lead to a diagnosis.[8]

If you smoke, you are twice as likely to develop the disease compared to someone who doesn't.[9] Smoking may also make you have watery stools more often, and for a longer time.[6] There is advice and support available if you would like to quit smoking. If you're wondering whether stopping the use of other drugs or vaping will help your MC, there is not yet evidence for this like there is for tobacco, however it may be helpful to your health.

Smokers are 2x more likely to develop MC

Key Facts for Healthcare Professionals

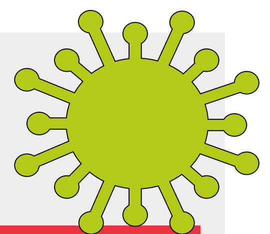
There are several risk factors increasing the likelihood of an MC diagnosis.

Certain autoimmune diseases have been linked to MC, including rheumatoid arthritis, type 1 diabetes mellitus and coeliac disease.[6] Patients with a previous gastrointestinal infection could develop MC due to disruption in the gut microbiome.[8]

The frequent use of some medications such as PPIs, NSAIDs and SSRI's have been linked to an increased risk of MC.[7] These drugs may not cause MC directly, but they can worsen diarrhoea, bringing the disease to attention.[8]

A clinical review with the patient and the treating HCP should evaluate these medications. Non-essential medications should be changed in case they are a contributing factor to MC symptoms. Certain medications may need to be discussed with the patient's GP or other specialists before stopping them.

Patients who smoke are two times more likely to develop MC than non-smokers.[9] Smoking may increase the frequency of watery stools in MC and the risk of longer symptom duration.[6] As always, if the patient is willing, they should be referred for smoking cessation advice. If patients ask about stopping vaping or smoking of other drugs, there is only evidence for stopping tobacco smoking but stopping these may also be helpful.



Gut infections have been linked to MC

Who is affected by MC?

Key Facts for Patients

MC affects around 1 in every 1,000 people.[7] While anyone can get MC, even children, it mainly affects women over 40.[7]

People over 65 are 5 times more likely to have MC than someone who's younger.[10] And around 7 out of every 10 sufferers are women.[7]

7/10 of sufferers are women

Key Facts for Healthcare Professionals

MC is no longer considered a rare disease, with the estimated prevalence being 119 per 100,000 of the population.[7] While anyone can get MC, even children, it mainly affects women over 40.[7]

Those over the age of 65 are 5 times more likely to be diagnosed with MC than younger people.[10] The risk of developing MC is higher in women than in men; 72% of sufferers are female.[7]

5 Are there different types of MC?

6 How is MC different to IBS and IBD?

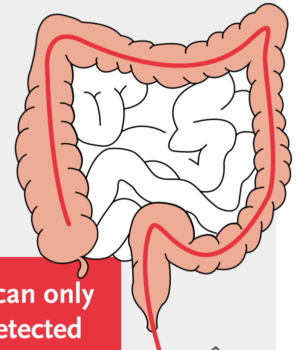
How is MC diagnosed?

Key Facts for Patients

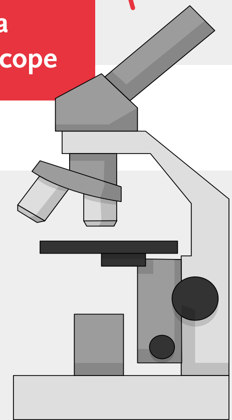
To diagnose MC, a doctor needs to look at your colon and take a sample of the tissue of the colon. This is done using a procedure called a colonoscopy.[11] In a colonoscopy, you will be given laxative, so your bowels are empty for the test. Though you will usually be awake for the procedure, you will be offered medicine to make you more comfortable. During the procedure the doctor will pass a long, thin, flexible tube with a camera at the end into your bottom.

If your colon looks normal, that doesn't rule out MC. Your doctor will still need to take a sample of tissue (biopsy) to check the cells under a microscope.[7] Changes to the appearance of tissue under the microscope will confirm whether you have the disease.

Checking these cells can take up to 2 weeks so don't be alarmed if you haven't had anything back from the hospital before this. If you do have MC you will be contacted by your healthcare professional.



MC can only be detected under a microscope



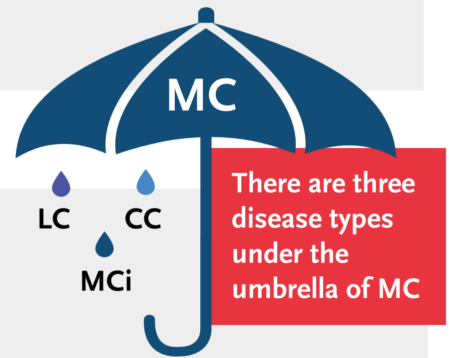
Key Facts for Healthcare Professionals

To diagnose MC, a colonoscopy with histologic sampling is required.[11] During the colonoscopy, visual changes to the colon are only present in 1 in 3 MC patients; changes are not specific to MC.[2,12] Diagnosis therefore requires biopsies taken from the left and right side of the colon.[12] Histological examination will show distinct features of MC.[7] Overall, the three characteristics of MC are chronic watery diarrhoea, a normal looking endoscopy and a distinct histology.[7]

Are there different types of MC?

Key Facts for Patients

There are three different types of MC — collagenous colitis, lymphocytic colitis and incomplete microscopic colitis. The only difference between them is the way the tissues look under the microscope. All three types cause similar symptoms and are treated the same way.



Key Facts for Healthcare Professionals

There are three different types of MC — collagenous colitis (CC), lymphocytic colitis (LC) and incomplete microscopic colitis (MCi). Each is defined only by its histopathologic criteria.

In CC, the tissues have a thickened subepithelial collagen band (>10 μm).[1,2]

In LC, the tissues do not have this collagen change but rather an increased number of intraepithelial lymphocytes (≥20 per 100 epithelial cells).[1,2] With LC it's important to rule out a stool infection as this can also increase lymphocyte numbers.

Finally, MCi describes patients who have abnormal histology, but it falls short of the criteria for either CC or LC.[5] There may be a thickened collagen layer between 5-10 μm and/or intraepithelial lymphocyte numbers between 5-20 per 100 epithelial cells.[1,2]

Since patients with CC, LC and MCi cannot be distinguished from each other based on clinical characteristics or symptom presentation, they undergo the same treatment under the umbrella of MC.[5,13]

How is MC different to IBS and IBD?

Key Facts for Patients

MC is a type of inflammatory bowel disease (IBD). It is the name given to the group of diseases where the large intestine becomes inflamed.[13] You may have heard the terms ulcerative colitis and Crohn's disease which are other types of IBD.

Unlike MC, irritable bowel syndrome (IBS) is not related to inflammation of the large intestine. MC can at first sight be mistaken for IBS.[2] But in IBS stool consistency varies between diarrhoea and constipation.[11] Diarrhoea in IBS does not often happen at night like it does with MC. MC is recognised because the diarrhoea is watery with no blood.[14] IBS patients often feel bloated and will have experienced stomach pain, all of which are not the most common symptoms of MC.[11]

For more information on the difference between IBS and MC, visit the MC Explained Atlas below:

Key Facts for Healthcare Professionals

Inflammatory bowel disease (IBD) is the name for a group of diseases where the large intestine becomes inflamed. MC, Crohn's and ulcerative colitis (UC) are different diseases which all come under the umbrella of IBD.[13] Crohn's and UC can result in bloody stools, whereas MC causes watery, non-bloody stools.[2] Whilst MC typically shows a normal colonoscopy, Crohn's and UC make the colon visibly inflamed/ulcerated.[12]

Unlike MC, irritable bowel syndrome (IBS) is not related to inflammation of the large intestine. IBS is the name for a group of symptoms. The classic symptoms of IBS present differently to MC, but the overlap can lead to a misdiagnosis, especially if further tests are not done.[2] In fact, around 1 in 3 MC patients are misdiagnosed with IBS.[2] IBS patients often feel bloated and will have experienced abdominal pain, which are not symptoms of MC.[11] The key difference is in stool consistency which varies between loose and solid in IBS but is always watery in MC.[11] Another differentiator for MC is having nocturnal diarrhoea.[14]

The table below offers a simple guide based on clinical symptoms and signs to help the differential diagnosis of patients with chronic diarrhoea.[14]

	Mean age	Gender	Stool consistency	Nocturnal	Incontinence	Pain	Blood	Bloating	Weight loss	Diagnostic tests
MC	>50	F>M	Watery	Yes	Yes	Unusual	No	No	Possible	Serial colonic biopsies including right side
IBS	<40	F>M	Watery/ Loose	No	Possible	Yes	No	Yes	No	Clinical history
IBD	<40	Equal	Loose	Possible	Yes	Possible	Possible	Possible	Yes	Colonoscopy, biopsies, imaging

1. Can MC symptoms be improved through diet?
2. What medical treatment is available for MC?
3. How long is the course of treatment?
4. How can you tell if the treatment is working?
5. What happens when you stop taking treatment after 8 weeks?
6. What happens if the symptoms reappear after stopping treatment?
7. Are there any safety concerns with MC treatment?
8. Does MC ever require surgery?

Can MC symptoms be improved through diet?

Key Facts for Patients

You can make some diet changes to reduce your discomfort. First of all, MC patients are 50 times more likely to have coeliac disease (an allergy to gluten which is found in wheat, barley and rye).[6] This can easily be ruled out with a simple blood test.

You may find your symptoms improve when you have less caffeine, dairy and alcohol because these items can worsen inflammation in some people.[15] Spicy foods and high-fat, deep-fried foods may also worsen your diarrhoea. Everyone is different. So it may be useful to record a food diary for at least a month as this will help pinpoint specific foods which make your diarrhoea worse.

Caffeine and dairy can worsen symptoms in some people

Key Facts for Healthcare Professionals

Since MC patients are 50 times more likely to have coeliac disease, check if they have been tested to rule out gluten as a cause of diarrhoea.[6] Dietary changes to reduce inflammation include reducing intake of caffeine, dairy and alcohol.[15] Spicy foods and high fat, deep-fried foods may also worsen diarrhoea symptoms. Everyone is different so it may be worth suggesting patients keep a food diary for at least a month to monitor what makes their diarrhoea worse.

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

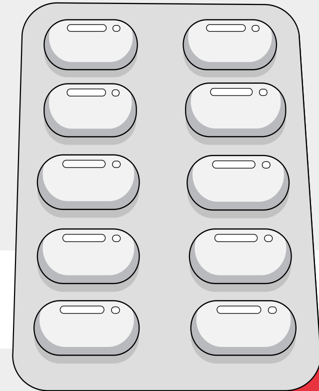
8 Does MC ever require surgery?

What medical treatment is available for MC?

Key Facts for Patients

Budesonide is a steroid medication used to treat MC. You may hear this and think of the "steroids" used by bodybuilders, but this steroid is different — it treats inflammation.

Budesonide fights inflammation locally, right where it's needed in your gut.[16] When you take budesonide, and it has worked on the inflammation, it's absorbed from your digestive system. Then it's transported to the liver where it's mostly broken down.[16] Only a small amount travels around your bloodstream, so there's a low risk of side effects.[16]



Steroids are used to treat MC

Key Facts for Healthcare Professionals

Budesonide is a corticosteroid medication used to treat MC. It may be helpful to explain to patients that it's not the same as the "steroids" used by bodybuilders and they instead treat inflammation.

Budesonide has advantages over prednisolone. Prednisolone is a different corticosteroid with 80% bioavailability.[17] This means it can act on multiple body systems because glucocorticoid receptors are present in nearly all cell types.[18,19] Its severe side effects include weight gain, bone fractures and depression which are all strongly associated with worse HRQoL.[18]

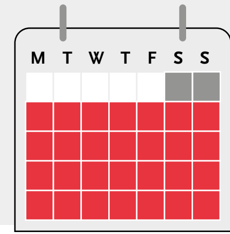
By contrast, budesonide is a "steroid sparing" steroid. It selectively treats the gut due to the fact that only a negligible amount can get access to the systemic circulation.[5] 90% of the budesonide is deactivated in the liver, reducing bioavailability and the risk of side effects.[16]

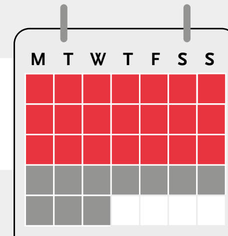
8 Does MC ever require surgery?

How long is the course of treatment?

Key Facts for Patients

To start with, a daily dose of 9 mg budesonide (orally in the form of tablets or capsules) is prescribed for 6 to 8 weeks.[7] You may also be given a lower dose to take over the long term and keep the disease at bay.





Key Facts for Healthcare Professionals

Oral budesonide is initially prescribed 9 mg daily for 6 to 8 weeks.[7] It is advised that MC is then maintained long-term on a lower dose of budesonide (3-6 mg daily).[7]

4 How can you tell if the treatment is working?

5 What happens when you stop taking treatment after 8 weeks?

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

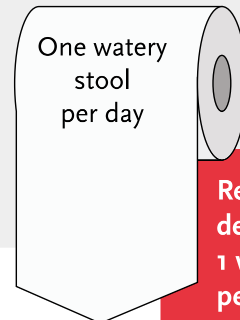
8 Does MC ever require surgery?

How can you tell if the treatment is working?

Key Facts for Patients

You should know quite quickly if the treatment is working as you will need to go to the toilet less frequently and you may find fewer poos will be watery. After 8 weeks on budesonide the symptoms may be completely resolved.[20]

If you have 3 or fewer stools a day and only 1 of these is watery, healthcare professionals consider your MC to be in remission.[7] It may be helpful to keep a record of your toilet visits to monitor these signs.



Remission is defined as only 1 watery stool per day

Key Facts for Healthcare Professionals

Patients will notice treatment working if their diarrhoea improves. Returning to normal poo frequency and life without diarrhoea usually takes 6-8 weeks or longer.[20] A patient in clinical remission would be having less than 3 stools per day with only 1 of those being watery.[7]

5 What happens when you stop taking treatment after 8 weeks?

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

8 Does MC ever require surgery?

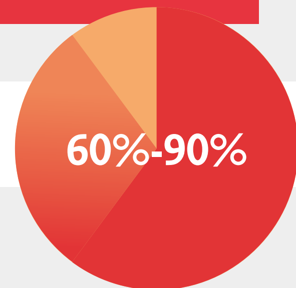
What happens when you stop taking treatment after 8 weeks?

Key Facts for Patients

Sometimes your diarrhoea can reoccur once you finish your course of budesonide.[21] This happens in 60-90% of patients and can be as soon as 2 weeks after you stop taking budesonide.[21,22]

To help stop this happening, you may be given a lower dose of budesonide to take over the long-term and keep the disease at bay.[7] This is called maintenance therapy.[21]

After finishing a course of budesonide symptoms reappear in 60-90% of people



Key Facts for Healthcare Professionals

Recurrence of symptoms after finishing budesonide occurs in 60-90% of patients.[21] Clinical relapse has been reported as soon as 2 weeks after withdrawal of budesonide.[22] This is more likely to happen in older patients with a longer duration of symptoms before starting the therapy.[6]

Therefore, it is advised that MC is maintained long-term on a lower dose of budesonide (3-6 mg daily).[7] Maintenance therapy does not alter the long-term disease course.[21] Although there is no evidence that the condition can be cured, removing the symptoms can make a significant improvement in a patient's quality of life.

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

8 Does MC ever require surgery?

What happens if the symptoms reappear after stopping treatment?

Key Facts for Patients

Unfortunately MC isn't something that's curable so if you experience a relapse of symptoms after stopping treatment you will be prescribed 8 weeks of budesonide at 9 mg daily again.[7]

Importantly, the symptoms may return for a reason other than the medication, such as diet changes. As always, discuss any concerns with your healthcare professional.

Key Facts for Healthcare Professionals

If a patient's diarrhoea symptoms reappear after finishing the initial course of budesonide, it may be necessary to start them on treatment again.

Be sure to check with patients regarding any changes that may have caused the relapse, mentioning the importance of following diet advice if appropriate.

5 What happens when you stop taking treatment after 8 weeks?

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

8 Does MC ever require surgery?

Are there any safety concerns with MC treatment?

Key Facts for Patients

Budesonide is tolerated well by the body.[7] We know this from multiple studies which compared a group of patients given budesonide long-term and a group that were given a placebo.[23] This is like a fake pill which has no active medicine in it. The same amount of people had side effects on budesonide as those taking the placebo, meaning it's tolerated well.[23]

Budesonide is well tolerated by the body

Key Facts for Healthcare Professionals

Budesonide has a favourable tolerability profile with a 90% clearance rate meaning less systemic side effects will occur.[7] A meta-analysis of steroids for MC showed long-term budesonide had no difference in adverse effect rates compared to the placebo.[23]

4 How can you tell if the treatment is working?

5 What happens when you stop taking treatment after 8 weeks?

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

8 Does MC ever require surgery?

Does MC ever require surgery?

Key Facts for Patients

Surgery is rarely needed to treat MC. It's only considered as a very last resort when medicine and all other forms of therapy haven't worked.[24] Your IBD team will be looking after you and will keep you informed during your care so you will be involved in any decisions regarding your care. The objective of any treatment is to help you maintain your quality of life which will inform any discussion.

Surgery is rarely needed to treat MC and is only a last resort

Key Facts for Healthcare Professionals

Surgical intervention for MC is reserved for the extremely rare case that patients are unresponsive to any medical therapy and diarrhoea symptoms are debilitating.[24]

Note:
A loop ileostomy procedure can resolve diarrhoea symptoms of MC by diverting the faecal stream.[25] It involves a laparoscopic incision in the abdomen to pull the loop of the small intestine through. The loop is opened up and stitched to the skin, creating the stoma for waste drainage into a stoma bag.[25]

6 What happens if the symptoms reappear after stopping treatment?

7 Are there any safety concerns with MC treatment?

8 Does MC ever require surgery?

1 Does MC affect fertility?

2 Does MC eventually go by itself?

3 Is MC linked to cancer?

4 Can MC lead to death?

5 Is MC passed on in families?

6 Where can I go for further information?

Does MC affect fertility?

Key Facts for Patients

Although the large majority of people are affected after their reproductive years, MC can affect women who are still fertile. However, it is possible to become pregnant following an MC diagnosis.[7,26]

Other inflammatory bowel diseases have been linked with problems in pregnancy, but MC has not.[27] More research on MC and fertility/pregnancy is required.

It's unlikely you would be prescribed budesonide during pregnancy

It is possible to become pregnant after an MC diagnosis

Key Facts for Healthcare Professionals

It is known that the peak onset of MC in women comes after the reproductive years.[1] However, it is possible to become pregnant following an MC diagnosis.[26]

Whilst MC comes under the umbrella term IBD, it is clinically distinct from Crohn's and ulcerative colitis which have been linked to adverse pregnancy outcomes.[27] Therefore more research on MC and fertility/pregnancy is required.

Budesonide should not be prescribed during pregnancy unless essential.

Does MC eventually go by itself?

Key Facts for Patients

MC is typically an ongoing (chronic) condition.[1] So you need to keep taking treatment to keep the disease symptoms manageable. It's important to take the correct dose of medication on time, as well as follow diet advice.

Some people find disease symptoms stop and start over a long period of time.[28] But only 1 in 10 people with this condition will have the disease go away without any treatment.[28]

It's important to keep taking medication to manage symptoms

Key Facts for Healthcare Professionals

MC is typically a chronic condition requiring constant maintenance of treatment to keep the disease in stable remission.[1] This is why it is essential that patients take the correct dose of medication on time and follow diet advice.

Some patients will experience the disease symptoms intermittently.[28] Only 10% of patients will experience spontaneous remission following a single attack of the disease.[28]

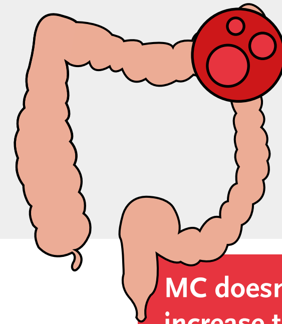
6 Where can I go for further information?

Is MC linked to cancer?

Key Facts for Patients

Unlike other types of IBD, having MC does not increase your risk of developing colon cancer.[5,29] In fact, some research suggests the opposite! MC tissues may produce some molecules which work against colon cancer.[30]

If you do see blood in the stool then it's important to mention this change of symptoms to your healthcare professional.



MC doesn't increase the risk of developing colon cancer

Key Facts for Healthcare Professionals

There is not an increased risk of colonic or extra-colonic malignancies in MC patients when compared to the general population.[2,29] This contrasts to other forms of IBD (Crohn's and ulcerative colitis) which do increase the risk of colorectal cancer.[29]

There is even some research which suggests MC has a protective effect against colorectal cancer.[30]

5 Is MC passed on in families?

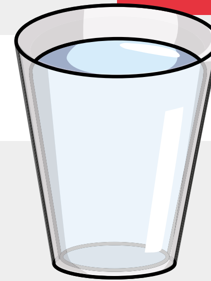
6 Where can I go for further information?

Can MC lead to death?

Key Facts for Patients

There is no difference in mortality between people with MC and the general population.[4] Whilst MC isn't fatal itself, it is important to make sure you drink enough water to avoid becoming dehydrated as this can lead to kidney damage.[6]

It's important to stay hydrated



Key Facts for Healthcare Professionals

Reassure patients that MC is a benign condition.[5] There is no difference in mortality between people with MC and the general population.[4] Whilst MC isn't fatal itself, it is important to make sure patients drink enough water to avoid becoming dehydrated as this can lead to kidney damage and further to acute kidney injury.[6]

4 Can MC lead to death?

5 Is MC passed on in families?

6 Where can I go for further information?

Is MC passed on in families?

Key Facts for Patients

MC cases are sometimes seen within the same family.[28] Some MC sufferers may have a family history of IBD, but we don't know whether the cause is genetic and can be passed on.[28] The risk of developing MC does, however, increase with other inherited conditions such as coeliac disease.[6]

It's unclear whether MC is genetic

Key Facts for Healthcare Professionals

It is unclear whether patients have a genetic predisposition to MC and a limited number of familial cases have been reported.[28] Few patients with MC have a family history of IBD, but any genetic links remain uncharacterised.[28] The risk of developing MC does, however, increase with other inherited conditions such as coeliac disease.[6]

4

5 Is MC passed on in families?

6 Where can I go for further information?

Where can I go for further information?

Key Information for Patients

For more information click below to see the MC patient leaflet by Dr Falk Pharma or visit the charity website Guts UK.

MC Patient Leaflet

Guts UK Website

Key Information for Healthcare Professionals

For more information access resources from Dr Falk by scanning these QR codes:

Dr Falk Pharma UK website

MC Educational Booklet

MC Hub

MC Explained Atlas

MC Patient Leaflet

MC Presentation by Professor Probert

Abbreviations
CC: collagenous colitis
HCP: healthcare professional
HRQoL: health-related quality of life
IBD: inflammatory bowel disease
IBS: irritable bowel syndrome
LC: lymphocytic colitis
MC: microscopic colitis
MCi: incomplete microscopic colitis
NSAID: non-steroidal anti-inflammatory drug
PPI: proton pump inhibitor
SSRI: selective serotonin re-uptake inhibitor
UC: ulcerative colitis

References
1. Miehlke S *et al*. Lancet Gastroenterol Hepatol 2019; 4(4): 305-14.
2. Münch A *et al*. Frontline Gastroenterol 2020; 11(3): 228-34.
3. Nigam Y *et al*. Nursing Times 2019; 115(10): 50-3.
4. Townsend T *et al*. Frontline Gastroenterol 2019; 10(4): 388-93.
5. Münch A. UEG Education 2021; 21: 10-3.
6. Tome J *et al*. Mayo Clin Proc 2021; 96(5): 1302-8.
7. Miehlke S *et al*. United Eur Gastroenterol J 2021; 9(1): 13-37.
8. Khalili H *et al*. Gastroenterology 2021; 160(5): 1599-1607.e5.
9. Burke KE *et al*. J Crohns Colitis 2018; 12(5): 559-67.
10. Fernández-Bañares F *et al*. J Crohns Colitis 2016; 10(7): 805-11.
11. Fedor I *et al*. Ther Adv Chronic Dis 2022; 13: 20406223221102821.
12. Goudkade D *et al*. Ann Diagn Pathol 2020; 46: 151520.
13. Walsh C. Gastro Nurs 2021; 19(9): 20-6.
14. Output of a round table discussion of UK physicians expert in the treatment of MC, supported by an educational grant from Dr Falk Pharma.
15. Campmans-Kuijpers MJE, Dijkstra G. Nutrients 2021; 13(4): 1067.
16. Miehlke S *et al*. J Gastroenterol Hepatol 2018; 33(9): 1574-81.
17. Bashar T *et al*. Dose Response 2018; 16(3): 1559325818783932.
18. Manson SC *et al*. Respir Med 2009; 103(7): 975-94.
19. McMaster A, Ray DW. Exp Physiol 2007; 92(2): 299-309.
20. Dietrich CF. UpToDate 2022. Available at: uptodate.com/contents/microscopic-lymphocytic-and-collagenous-colitis-clinical-manifestations-diagnosis-and-management Accessed 27.03.2023.
21. Münch A *et al*. Gut 2016; 65(1): 47-56.
22. Boland K, Nguyen GC. Gastroenterol Hepatol (NY) 2017; 13(11): 671-7.
23. Stewart MJ *et al*. Clin Gastroenterol Hepatol 2011; 9(10): 881-90.
24. Datta I *et al*. Can J Surg 2009; 52(5): E167-72.
25. Järnerot G *et al*. Gastroenterol 1995; 109(2): 449-55.
26. Storr M. IRSN Gastroenterol 2013: 352718.
27. Mårild K *et al*. EClinicalMedicine 2022; 53: 101722.
28. Ohlsson B. Therap Adv Gastroenterol 2015; 8(1): 37-47.
29. Levy A *et al*. BMC Gastroenterol 2019; 19(1): 1.
30. Lushnikova A *et al*. Front Med (Lausanne) 2021; 8: 727412.

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Adverse events should be reported. Reporting forms and information can be found at https://yellowcard.mhra.gov.uk or search for MHRA Yellow Card in the Google Play Apple App Store (UK residents) or at email: medsafety@hpra.ie or at http://www.hpra.ie/homepage/aboutus/report-an-issue/human-adverse-reaction-form (residents in Ireland). Adverse events should also be reported to Dr Falk Pharma UK Ltd at office@drfalkpharma.co.uk

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