REVIEW

How to manage IBD in the 'elderly'

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ABSTRACT

As the incidence of inflammatory bowel disease (IBD) rises and the global population ages, the number of older people living with these conditions will inevitably increase. The challenges posed by comorbid conditions, polypharmacy, the unintended consequences of long-term treatment and the real but often underestimated mismatch between chronological and biological ages underpin management. Significantly, there may be differences in disease characteristics, presentation and management of an older patient with IBD, together with other unique challenges. Importantly, clinical trials often exclude older patients, so treatment decisions are frequently pragmatic, extrapolated from a number of sources of evidence and perhaps primarily dictated by concerns around adverse effects. This review aimed to discuss the epidemiology, clinical features and considerations with management in older patients with IBD.

INTRODUCTION

As the incidence of inflammatory bowel disease (IBD) rises and the global population ages, the number of older people living with these conditions will inevitably increase.[1 2] Clinicians will see two groups of patients: those diagnosed with IBD at a younger age who have attained an older age and individuals who are diagnosed at or after the age of 60 years (the accepted defining age threshold for this group).[2] The challenges posed by comorbid conditions, polypharmacy, the unintended consequences of long-term treatment and the real but often underestimated mismatch between chronological and biological ages underpin management. Significantly, there is often a disconnect between chronological age and biological age, and therefore, in the 'elderly', one must distinguish between the fit and the frail.[3] Clinical trials often exclude older patients, so treatment decisions are frequently pragmatic, extrapolated from a number of sources of evidence and perhaps primarily dictated by concerns around adverse effects. This review aims to discuss the epidemiology, clinical features and considerations with management in older patients with IBD. Where the term elderly or 'elderly onset' has been used in the literature, we have indicated this in quotation marks, while we suggest the term 'older' be used in preference.

EPIDEMIOLOGY

The majority (65%) of older persons diagnosed with IBD are diagnosed in their 60s, 25% in their 70s and as many as 10% in the ninth decade of life.[4]

The incidence of older-onset ulcerative colitis (UC) and Crohn's disease (CD) varies from 1.1/100 000 to 16.5/100 000 and from 0/100 000 to 18.9/100 000, respectively.[5] In the large French population-based (EPIMAD) registry, the incidence of UC and CD in the general population was 3.1/10 000 and 2.6/100 000, respectively.[4]

The incidence of UC is higher than CD in older individuals and, in a study from Hungary, the incidence of UC in this group also increased from 1.09 between 1977 and 1981 to 10.8 per 100 000 from 2002 to 2007.[6] Similarly, the incidence of CD in older individuals increased from being virtually unknown until the 1990s to 3.04/100 000 from 2002 to 2007.[6] A Dutch population-based study reported that the incidence of 'elderly-onset' IBD increased from 11.71/100 000 persons in 1991 to 23.66/100 000 persons in 2010.[7]

Disease characteristics and natural history

The differential diagnosis of IBD in older individuals is wide (table 1), which may lead to a misdiagnosis (in up to 60%) or delayed diagnosis (by up to 6 years).[2]

After diagnosis, while older-onset IBD is broadly comparable to that seen in younger patients with IBD, there are clear and significant differences[8] (tables 2 and 3). It has been noted that abdominal

Table 1 Differential diagnosis in older individuals

Differential diagnosis	Symptoms that may mimic	Points to aid differential
Infectious	Diarrhoea, blood, weight loss	Recent travel; new medication, especially antibiotics
Ischaemic colitis	Bloody diarrhoea, abdominal pain usually sudden onset, pain associated after food	Cardiovascular disease Peripheral vascular disease Diabetes, hypertension, hypercholesterolaemia Smoker, arrhythmias
Diverticular disease	Left-sided abdominal pain, bloody diarrhoea	Classic left-sided pain Colonoscopic/radiological evidence Segmental colitis associated with diverticulitis Segmental peridiverticular distribution with rectum and proximal colon spared
Microscopic colitis	Diarrhoea	Drugs that may contribute non-steroidal anti-inflammatory drugs, lansoprazole, SSRIs Normal macroscopic findings
Radiation-induced colitis	Bloody diarrhoea	Previous radiotherapy
Solitary rectal ulcer	Rectal bleeding, tenesmus	History of chronic constipation with straining
Colorectal cancer	Change in bowel habit, rectal bleeding, weight loss	Systemic features, weight loss
Pancreatic insufficiency	Diarrhoea, weight loss	Floating, pale, foul-smelling stools

SSRI, selective serotonin reuptake inhibitors.

pain and systemic features of IBD are less commonly reported in older patients.[4 9] For CD, colonic disease location is most common (range 30%–65%) followed by ileal (range 10%–50%) and ileocolonic (range 10%–38%), with inflammatory behaviour being the most common (68%–96%), followed by stricturing and penetrating disease.[7] Perianal and upper gastrointestinal involvement is less common.

For UC, left-sided disease appears most common (45%, 95% CI 40% to 52%), followed by pancolitis (31%) and proctitis (22%).[10] Proximal extension also appears less common.[11]

A recent meta-analysis showed overall rates of surgery, immunomodulator use and biologic use in patients with UC of 9%, 17% and 4%, respectively.[10] Patients with 'elderly-onset' UC were less likely to receive immunomodulators (OR 0.60, 95% CI 0.45 to 0.79) or biologic therapies (OR 0.41, 95% CI 0.27 to 0.62) and were more likely to undergo surgery (OR 1.36, 95% CI 1.18 to 1.57; p<0.001), suggesting that it is perhaps physician hesitancy with prescribing biologics rather than a truly indolent disease course.[10 11]

In the same meta-analysis, overall rates of surgery, immunomodulator use and biologic use in 'elderly-onset' CD patients were 32%, 32% and 15%, respectively.[10]

The rates of disease progression in patients with 'elderly-onset' CD have been lower than those in patients with non-elderly-onset CD.[4 7 12]

Specific challenges in older individuals

Healthcare use

Older patients with IBD are at a higher risk of hospitalisation. A recent US study reported that 25% of all IBD-related hospital admissions in the USA were in patients aged over 65 years. These patients were more likely to be malnourished, anaemic and hypovolaemic, with higher transfusion requirements, requiring longer postoperative hospital stays.[13] Venous thromboembolic complications are also more common.[2] Higher healthcare use as an outpatient and higher rates for admission to hospital is a common feature across other studies, where a longer average length of stay has also been demonstrated.[14] Furthermore, patients with 'elderly-onset' IBD have a 1.5 times greater risk of all-cause mortality when compared with the background population (figure 1).[15]

Table 2 Crohn's disease in older individuals (compared with younger)

Location	Colonic disease more common than ileocolonic
Bleeding	Less than younger patients
Penetration	Less penetration and less stricturing
Extraintestinal manifestations	Less common
Cancer risk	More common

Table 3 Ulcerative colitis in older individuals (compared with younger)

Location	More likely left-sided or extensive than proctitis, less disease extension
Symptoms	Less diarrhoea
Flares	Less flares
Extraintestinal manifestations	Less common
Cancer	More common

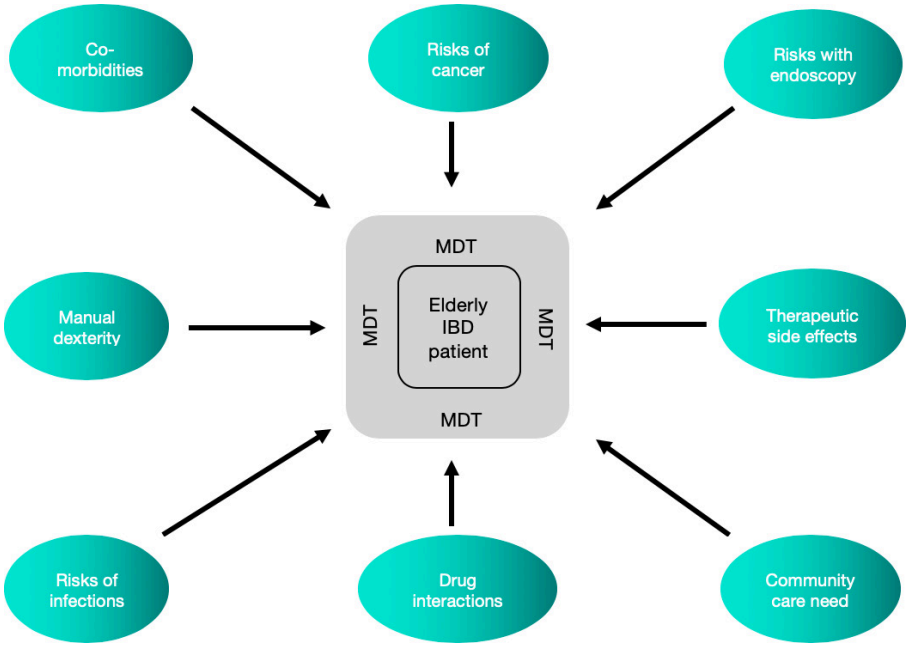

Figure 1 Considerations for treatment of an elderly patient with IBD. IBD, inflammatory bowel disease; MDT, multi-disciplinary team.

Mental and neurodegenerative illnesses

Evidence suggests that in older patients with CD, depression and perceived stress are more common and therefore should be screened and treated early.[16] IBD itself may be a risk factor for the development of other cognitive conditions; for example, patients with IBD appear to have a 22% increased risk of Parkinson's disease when compared with the background population, implicating gut inflammation and the psychoneuroimmunological axis.[17]

Metabolic bone disease

Bone health is a specific concern. A large population study showed that elderly patients with IBD were 1.3 times more likely to develop a fracture when compared with younger patients, underpinning the need to exercise particular caution when prescribing corticosteroids in this vulnerable group of patients.[18] We recommend that older patients with IBD should be risk assessed using a bone mineral density scan and the FRAX score[19] to determine their risk of bone disease. Those patients considered at high risk should be considered for bone-protective therapy and repeated bone mineral density scans annually or if stable at least every 3 years.[20]

Comorbidities

Conditions unrelated to IBD, but coexistent in older patients, will influence treatment efficacy and adverse effects. For example, patients with diabetes and hypertension may not be ideal candidates for steroids.[21] In patients with congestive heart failure New York Heart Association (NYHA) class III/IV), anti-tumour necrosis factor (TNF) therapy is contraindicated, and patients with a history of recent malignancy (<2 years) may not be suitable candidates for thiopurines where the risk of lymphoproliferative disorders is higher.[22]

In one study, elderly patients with IBD were prescribed up to 10 medications, wherein a third had potential drug interactions with IBD medications.[23] Furthermore, medication adherence with such a high pill burden cannot be underestimated. Importantly, natural decline in renal, cognitive and cardiovascular function may impact on the pharmacokinetics and pharmacodynamics of IBD medications. Specific medication challenges are discussed in the next section.

Specific medications

Aspirin and non-steroidal anti-inflammatory drugs (NSAIDs)

Many older patients will be treated with NSAIDs and aspirin for a variety of comorbidities. Data are conflicting regarding the safety of NSAIDs in IBD. A long-term follow-up study suggested that they are probably safe in short courses but may be responsible for 20% of clinical relapses, with certain cyclooxygenase-2 (COX-2) inhibitors having a better safety profile in IBD.[24] Conversely, aspirin use appears to have no direct impact on IBD course in older persons and should be used as necessary in the context of coexisting medical conditions.[25] We advise to try and avoid NSAID use in the elderly with IBD and to continue aspirin if clinically indicated for a comorbidity.

Antibiotics

Antibiotics have been used in some patients with mild–moderate colonic CD, infectious complications of fistulising CD, pouchitis and as an adjunct to surgical drainage of CD-related abscesses.[26] While useful, the risk of adverse effects, particularly *Clostridium difficile*, must be considered. The condition is associated

with a significant increase in hospital mortality in older patients,[27 28] and antibiotic classes often used in IBD (such as fluoroquinolones) are particular risk factors for *C. difficile* in the elderly.[28]

Aminosalicyclates (5-ASAs)

5-ASAs, such as sulfasalazine and mesalazine, are a foundational therapy for UC in elderly patients. Despite their controversial role in CD, in the EPIMAD study, 90% of older CD patients were on 5-ASAs.[29] This appears to be similar in other population-based cohorts,[4 6] possibly due to prevalent colonic disease location, but could also reflect a reluctance for escalating therapy (physician or patient).

Although it has been established that the combination of oral and topical 5-ASAs in UC is more effective than oral therapy alone, fine motor issues with the use of topical therapy may be a limitation.[30] Furthermore, anorectal dysfunction in the elderly ranges between 10% and 25% in hospitalised patients and 4% in outpatients,[31 32] an obvious limitation for topical medication requiring retention. This effect is compounded by the presence of active inflammation, but selecting preparations with a lower volume of delivery or foam may be of benefit.

Therefore, a once daily preparation and foam-based preparation with an easy applicator may be more appropriate. 5-ASAs are relatively safe overall, but the British National Formulary guidance still advises 'caution' in older patients. Rare side effects can still occur and may be more relevant in an older group with comorbid conditions. These include diarrhoea, especially with olsalazine, pancreatitis and glomerulonephritis.[33] As chronic kidney disease is common in older patients, care must be taken when initiating 5-ASA, and regular biochemical monitoring must be adhered to as recommended by the British Society of Gastroenterology (BSG) guidelines.[20] 5-ASAs interact with six thioguanine, increasing the risk of myelosuppression, and can increase the anticoagulant effects of coumarin-based anticoagulants such as warfarin.[34]

Corticosteroids

Corticosteroids are the cornerstone for the decisive induction of remission in both CD and UC but well-recognised to be associated with undesirable side effects, and in this is only magnified in older patients.[35] Steroids may worsen fluid retention in heart failure, glycaemic control in diabetes, hypertension and osteoporosis, increasing the risks of fragility fractures, and may increase risk of cataracts and glaucoma, all conditions associated with advancing age.[36] It is also important to note that corticosteroids interact with phenytoin, phenobarbital, rifampicin and warfarin, reducing their drug activity.[2]

Corticosteroids also increase the risk of gastrointestinal haemorrhage especially in elderly patients with antiplatelets or anticoagulation agents.[34] In addition, they may also be associated with an altered mental states such as delirium, psychosis and hallucinations (perhaps more frequently) in elderly patients.[37] These important considerations and the sheer futility of prolonged steroid exposure underpin the need for astute steroid 'stewardship' with careful contingency planning with next steps in treatment.[38]

Budesonide is used for mild to moderate distal small bowel and right colonic CD,[37] and its newer modified-released multimatrix system has been licensed for mild to moderate UC. It has a high first-pass metabolism and is therefore reported to have less systemic side effects.[35] This may be favourable in the older age group, but more concrete data are needed to position these agents in treatment paradigms for older patients.[39]

Immunomodulators

A retrospective study by Juneja *et al* showed that 6% of elderly patients are on thiopurine and 1% are on methotrexate.[40] Thiopurines are associated with leucopenia, opportunistic infections, transaminitis and pancreatitis.[41] Therefore, regular biochemical monitoring is essential.[41] Thiopurines reduce the availability of warfarin, and regular INR monitoring is required while initiating thiopurines.[34] The increased risk of non-melanoma skin cancers necessitates annual dermatological examination.[42] Of major concern is the risk from lymphoproliferative disorders with a meta-analysis suggesting that the risk was four times greater than the general population.[43] Furthermore, like colorectal cancer (CRC), longer duration of IBD and thiopurine exposure were independent risk factors for lymphoproliferative diseases. As such, thiopurines should be avoided if at all possible in older patients, and their use, if considered, should be balanced against other comorbidities and risk of adverse events.[20]

Methotrexate may be used in CD, but monotherapy is not recommended in UC. It is associated with cytopaenia, transaminitis and gastrointestinal adverse effects such as nausea, diarrhoea and stomatitis.[44] In older patients, the side effects are more pronounced, leading to a higher discontinuation rate.[45] There are significant pharmacological interactions that should be carefully considered. Ciclosporin (CsA) can be used as a rescue therapy in acute severe UC. However, there are a number of considerations. CsA can worsen hypertension, which is common in the elderly. It can also induce nephrotoxicity when used with antibiotics such as gentamicin, trimethoprim, ciprofloxacin, histamin-2 receptor antagonists such as cimetidine and NSAIDs. CsA has a narrow therapeutic window and its level can be affected by P-450 cytochrome inhibitors and inducers. Therefore, the use of CsA should be carefully weighted against potential risks in older patients with multiple comorbidities and polypharmacy.

Anti-TNFs

Anti-TNFs have a pivotal role in the induction and maintenance of moderate to severely active IBD. However, the evidence supporting efficacy in elderly patients is conflicting. Desai *et al* demonstrated a lower response rate in the elderly than in younger adults (61% vs 83% p=0.01),[46] but this was not apparent in a Leuven cohort (79% vs 83%, p=0.64).[47]

There is, however, clear evidence for more frequent anti-TNF-related adverse events. An Italian study showed that patients over 60 years old on anti-TNFs are at greater risk of severe infections and mortality compared with younger patients or age-matched patients without anti-TNFs.[48] The risk of infection is yet higher in older patients on combination therapy with anti-TNF and an immunomodulator, leading to higher discontinuation rates.[46] As mentioned previously, anti-TNF therapy is contraindicated in patients with congestive heart failure (NYHA class III/IV).[49] As such, the European Crohn's and Colitis Organisation (ECCO) recommends that when used, monotherapy is preferred over bimodal immunosuppressive therapy in older persons.[2] Although there are no specific studies looking at higher trough levels in older patients, it appears that, in general, when necessary, optimising their use to attain adequate (or even higher) trough levels is not associated with an increase in significant adverse effects.[50 51]

Anti-integrins

Anti-integrins such as vedolizumab are a relatively new addition to the evolving treatment paradigm in IBD. From the landmark GEMINI trials, efficacy and safety appear similar across all age groups. Patients over the age of 55 who were on vedolizumab have the lowest rate of severe infections and side effect-related hospitalisation.[52] There were also no differences in malignancy or deaths between different age groups.[52] A recent retrospective study exploring the safety and effectiveness of anti-TNFs and vedozilumab in 131 patients showed that both anti-TNFs and vedolizumab had similar safety and effectiveness in the elderly population.[53] Head-to-head prospective clinical trials between vedolizumab and other biologics have been completed and will begin to influence the positioning of anti-integrins in treatment algorithms[54] in general, but the gut specificity and excellent adverse event profile are understandably appealing in selected older patients with IBD.

Ustekinumab

Ustekinumab is a humanised monoclonoal antibody against a common p40 subunit of interleukin 12 and 23. Following the UNITI trial,[55] it was approved for induction and remission of CD in 2017 in the UK. Although there are no studies directly comparing its efficacy and side effects between age groups, long-term safety data through to week 96 from the IM-UNITI study showed that the rates of serious adverse events and serious infections are similar in the active and placebo arms.[56] In a psoriasis cohort (where a lower dose of ustekinumab is used), no increased risk of adverse events and infections was demonstrated in elderly patients in two retrospective studies with a total of 46 patients.[57 58] Further data will be needed to ensure its safety and effectiveness in the elderly population. The UNIFI study published recently demonstrated its efficacy in UC,[59] and ustekinumab is currently under review in the UK as treatment for induction and maintenance of UC.

Janus kinase (JAK) inhibitors

Tofacitinib is an oral small molecule, JAK inhibitor approved by National Institute for Health and Care Excellence (NICE) in 2018 for moderate to severely active UC.[60] At 52 weeks, patients receiving tofacitinib 5 mg BD achieved significantly higher remission rates than those receiving placebo (34% vs 11%, p<0.001).[61] Again, however, efficacy data in older patients are lacking. The drug is associated with an increased rate of herpes zoster infection especially in elderly patients who are on concomitant glucocorticoid.[61 62] Exacerbation of dyslipidaemia may be a concern in older patients and warrant treatment after risk stratification in line with national guidelines.[63] Tofacitinib also increases cardiovascular events in older patients.[62] Based on the experience in rheumatoid arthritis, the Food and Drug Administration has recently warned a safety alert for the risk of pulmonary embolism and death in patients on 10 mg BD regime, which is used in induction for UC.[64] Therefore, further safety data especially in a larger older cohort is needed before specific recommendations can be made, but there are reasonable cautions and a pragmatic decision-making process is required. JAK inhibitors should be used with caution in those with previous pulmonary embolisms, deep vein thrombosis or clotting abnormalities.[65]

Combined immunosuppression

In the post hoc analysis of the REACT[66] trial (a randomised trial comparing early immunosuppression for CD vs standard treatment), the efficacy and safety of combined immunotherapy in the elderly was no different to conventional management in older and younger patients.[67]

Immunosuppressive medications, however, especially when used in combination with other medications in older age, are associated with an increased risk for opportunistic infections.[68–70] A study from the Mayo Clinic showed that three out of four deaths attributable to infliximab treatment were in patients aged 65 years or older. Notably, these patients had a longer disease course (15–26 years), severe disease and comorbid conditions, as well as being on concomitant immunomodulator therapy.

With vedolizumab and ustekinumab, the immunogenicity is low (4%[71] and 2.3%,[55] respectively), and the benefits of combination therapy with an immunomodulator are less clear. Post hoc analyses from GEMINI 1 and 2 trials did not show any additional benefits with a combination therapy in vedolizumab.[72 73] The use of an immunomodulator did not increase the ustekinumab trough level in a prospective study of 62 patients,[74] and there are conflicting studies for its synergistic effects.[75 76] Therefore, the use of a concomitant immunomodulator is less important in vedolizumab and ustekinumab, and it is not recommended especially in an older population where the risk of side effects is much higher.

Non-disease-modifiable medications

Importantly many older patients may be on other medications for symptoms associated with their IBD which do not modify the disease itself.

Iron

Many patients may require iron replacement therapy. An awareness of important side effects to include constipation, poor tolerance and abdominal pain are particularly important to consider in the older age group.

Loperamide

Urgency and incontinence can be very problematic and a source of embarrassment and social exclusion in an older patient with IBD. It has been reported that up to 24% of patients with IBD experience incontinence, and this is likely to be higher in an older population due to weakening of the anal sphincter muscles and comorbidities.[77] Antidiarrhoea agents such as loperamide may help these symptoms. Important side effects in the older patient to be aware of in IBD include dizziness and drowsiness.

Bile salt sequestrants

Bile salt sequestrants are typically used for patients with IBD with concurrent bile acid malabsorption. Specifically, these medications can bind other medications and prevent their clinical effect. Caution must therefore be applied to an older person with IBD using a bile salt sequestrant on concurrent medications. Advice should be provided to take other medications 1 hour before taking a bile salt sequestrant. As these are fat soluble vitamins, an annual check or consideration of fat-soluble vitamin status is recommended.

Diet and nutrition

The role of a dietary support is paramount in the elderly IBD population who are at increased risk of malnutrition. The European Society for Clinical Nutrition and Metabolism recommends that oral nutrition supplements should be considered especially in IBD flare.[78] Not only optimising nutrition is beneficial in IBD, but also the Mediterranean and Dietary Approaches to Stop Hypertension diet may have an additional benefit in elderly patients with IBD.[79] These diets limit simple carbohydrates, saturated fats and processed food while promoting plant-based food (fruits, vegetables, whole grains, legumes, seeds and nuts) and fish. In addition to an anti-inflammatory effect in CD with the Mediterranean diet (reduction in C reactive protein and normalisation of intestinal microbiota,[80 81] they also improve metabolic abnormalities such as cardiovascular diseases and type 2 diabetes, which are common in the elderly. Despite difficulties in conducting robust clinical trials on dietary intervention in elderly patients with IBD, it is intuitive to promote healthy diets in elderly patients with IBD with cardiovascular risk factors.

Surgery

Around 25% of all intestinal IBD surgeries are performed in elderly patients.[13] The indications for surgery are the same across all age groups, and evidence suggests that the morbidity and mortality from IBD surgery is similar when compared with a younger age group.[6 82 83] As in all age groups, optimisation of nutritional status and general health to the maximal extent possible, is desirable.[2] Stoma formation may present specific considerations in an older patient. These include the procedure itself, the postoperative recovery and the management of the stoma afterwards. It has been shown that overall, older patients have longer hospital stays, more postoperative complications and higher mortality rates, but it remains an acceptable option in an older patient.[84] Restorative surgeries for UC in selected patients may be appropriate; however, older patients undergoing ileoanal pouch formation have higher postoperative complications and longer lengths of stay.[85] These risks therefore need to be weighed up on an individual case-by-case basis, taking into account the alternatives and other comorbidities.

CRC risk and specific cancers not drug-related

Overall, the older population with IBD has a higher risk of cancer of any type than younger patients. A large nationwide study suggested that elderly patients with IBD are three times more likely than the background population to develop cancer when compared with younger patients with IBD, with the highest risks for CRC, non-Hodgkin's lymphoma and urinary tract malignancies.[86] A greater risk of non-melanoma skin cancers has also been reported.[87] The risks are likely to be multifactorial, including length of time on immunosuppression as well as an increasing duration of IBD (a well-known risk factor for the development of CRC as well as for lymphoproliferative diseases).[22 88–91] When considering patients diagnosed with IBD at a later age, a study suggested that there was no increased risk of CRC[92] when compared with patients without IBD. While this may be biassed by the lack of long-term

follow-up, studies from the USA and Italy also did not find any difference in the CRC risk between the elderly and adults with IBD.[87 93]

In the UK, CRC screening is offered until a patient reaches 75 years of age. Currently, there are no clear guidelines when to stop screening for patients with IBD, but it has been suggested to continue bowel screening if the clinical outcome and benefits outweigh the risks of doing the procedure. It has been noted that there is an increased risk of complications following a colonoscopy in the elderly,[94] and therefore the need for surveillance should be carefully discussed with patients.

Vaccinations

Older patients with IBD can be placed at higher risk of infections due to comorbidities, immunosuppressive agents such as thiopurines, methotrexate and biologics, suboptimal IBD control (leading to poor nutrition) and immunosenescence.[95] Patients are considered as immunosuppressed if they are on 20 mg or more of prednisolone or other equivalent steroids, have ongoing treatment with adequate doses of thiopurines, methotrexate or biologics, or had the aforementioned medications in the last 3 months.[61] Therefore, live vaccines such as intranasal influenza, BCG, yellow fever, varicella, oral typhoid, anthrax, and measles, mumps and rubella must be avoided in these patients. If live vaccines are required, they must be given at least 3 months after stopping immunosuppressive therapies or at least 3 weeks prior to these agents.[95 96]

Recommended vaccinations in patients with IBD are similar across all age groups. These include annual inactivated influenza vaccine, 5 yearly pneumococcal vaccine, hepatitis B and meningococcus, especially in those with splenectomy.[95 96] Therefore, vaccination serology and history must be taken at the earliest opportunity at the diagnosis of IBD followed by appropriate vaccinations.

CONCLUSION

A myriad of considerations underpin the holistic and considered management of elderly patients with IBD. These include age-related alterations in biological function, the likely impact of clinical comorbidities and concomitant medications, and locomotor and cognitive function. Effective management must also take into account the potential disconnect between ‘chronological’ and ‘biological’ age. Pragmatism must underpin treatment considerations.Thus, a frail patient at any age with comorbid illness and limited mobility may be at a higher risk from complications of a medical or surgical intervention than an older but ‘fit’ individual, and in some instances, mild or relatively asymptomatic disease may not require aggressive therapy with symptom control perhaps taking precedence. Yet, the message is not to ‘undertreat’, but to recognise the distinction between ‘fit’ versus ‘frail’, consider the potential for more pronounced adverse effects, and thereby set realistic and suitable targets for treatment in providing optimal and personalised care for this group of patients.

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