

FFPRHC Guidance (July 2003) Contraceptive Choices for Women with Inflammatory Bowel Disease

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This Guidance provides information on the effects of inflammatory bowel disease (IBD) in women of reproductive age with particular reference to contraceptive choices, fertility and pregnancy. For comprehensive advice on the management of patients with IBD, readers should refer to guidelines from the British Society for Gastroenterology.¹ A key to the grades of recommendations, based on levels of evidence, is given at the end of this document. Details of the methods used by the Clinical Effectiveness Unit (CEU) in developing this Guidance, and evidence tables summarising the research basis of the recommendations, are available on the Faculty website (www.ffprhc.org.uk). Abbreviations used include: 5-aminosalicylic acid (5-ASA), body mass index (BMI), bone mineral density (BMD), combined oral contraception (COC), confidence interval (CI), copper-bearing intrauterine contraceptive device (IUD), Crohn's disease (CD), depot medroxyprogesterone acetate (DMPA), dual X-ray absorptiometry (DEXA), emergency contraception (EC), gastrointestinal (GI), incidence rate ratio (IRR), inflammatory bowel disease (IBD), levonorgestrel-releasing intrauterine system (IUS), odds ratio (OR), progestogen-only emergency contraception (POEC), progestogen-only pill (POP), anti-tumour necrosis factor-alpha (anti-TNF- α), ulcerative colitis (UC), venous thromboembolism (VTE), World Health Organization (WHO).

What is inflammatory bowel disease (IBD)?

Inflammatory bowel disease (IBD) refers to two distinct disorders – Crohn's disease (CD) and ulcerative colitis (UC).¹ These two disorders have distinct clinical and pathological features but their cause is unknown. In patients with large bowel disease only there may be difficulty distinguishing between the two. Disease may be 'severe acute', 'intermittent relapsing', 'chronic persistent' or 'asymptomatic', and patients may present with abdominal pain, diarrhoea with blood and mucus, and frequent bowel movements.

Ulcerative colitis involves the large bowel (colon) only with inflammation of the superficial mucosal layer, which bleeds readily. The whole colon is affected in up to 20% of patients. Disease is confined to the rectum (proctitis) in 30% of patients.

Crohn's disease can affect the entire gastrointestinal tract and clinical symptoms reflect the site of disease. There is inflammation throughout the layers of the bowel wall (transmural) and affected areas can be interspersed with normal bowel (skip lesions). This transmural inflammation can lead to fibrosis and bowel obstruction, or to sinus tract and fistula formation involving adjacent organs. In contrast to UC, only 20% of CD patients will have disease confined to the colon. Small bowel involvement is most common, usually involving the distal ileum alone. The ileum and colon are both affected in up to 50% of patients and up to a third will present with perianal disease. Few will present with involvement predominantly in the mouth, oesophagus, gastroduodenum or proximal small bowel.

What effect does IBD have on reproductive health?

UC affects an estimated 160 people in every 100 000 whilst CD is less common, affecting an estimated 50 people per 100 000.¹ Women and men are equally affected but women are more likely to present with CD. IBD usually presents in the reproductive years,¹ and may therefore affect reproductive health, pregnancy and influence contraceptive

needs. An appreciation of the impact of pregnancy on IBD and the effects of IBD and its treatments on pregnancy and fertility allow clinicians to assess the importance of effective contraception.

Recommendation

1 Health professionals managing women with IBD should discuss its potential effect on reproductive health, pregnancy and contraceptive requirements (Grade C).

Does IBD have an effect on menstrual cycle, fertility and pregnancy?

Menstrual cycle

One retrospective, case-control study² investigated premenstrual and menstrual symptoms in women with IBD. Forty-nine women with CD, 49 with UC and 90 without disease completed a menstrual symptom questionnaire. Most women (93%) reported premenstrual symptoms, although women with CD had most symptoms. Women with IBD were twice as likely to have cyclical alterations in bowel habit compared to women without disease. No studies investigated the effect of sex steroid hormones on cyclical alterations in bowel habit.

Fertility

Five non-systematic reviews on fertility and pregnancy in women with IBD were identified.^{3–7} Fertility problems were more common in women with CD than women with UC. Three retrospective case-control studies^{8–10} addressed fertility in women with IBD. The largest and most recent study⁸ confirmed previous findings¹⁰ that women with CD have a higher rate of subfertility, and may take longer to conceive than women in the general population. Women with UC, however, had comparable fertility to women in the general population, although 23% experienced a delay in conception of more than 12 months. Another retrospective study,¹¹ which followed women for up to 20

years after diagnosis, found that women with IBD had normal fertility compared to women without disease from the same general population.

Pregnancy

One retrospective study suggested that normal-term pregnancy was as likely in women with active disease at time of conception as when disease was in remission at time of conception.¹¹ A retrospective, case-control study found no increase in early pregnancy loss in women with IBD.⁹ However, another retrospective study¹⁰ suggested that women with CD are more likely to miscarry than women with UC or women without disease. The risk of preterm labour was increased around three-fold in women with CD (OR 3.1, 95% CI 1.8–5.4) and UC (OR 2.7, 95% CI 1.8–5.4) compared to women without disease.¹⁰ Ideally women should be encouraged to plan pregnancy when disease is controlled and potentially teratogenic drugs are stopped.¹

Recommendation

2 Pregnancy in women with IBD should be a planned event when disease is well controlled (Grade B).

Do medications used in the treatment of IBD affect fertility, pregnancy or contraception?

Medical management of IBD is tailored to the site, severity and activity of disease. Treatments aim to reduce the inflammatory process using 5-aminosalicylic acid (5-ASA) drugs (mesalazine), corticosteroids or immunosuppressive agents (azathioprine, methotrexate and cyclosporin). The effects of these drugs in pregnancy, either in the management of IBD, rheumatoid disease or following transplantation, have been summarised.^{13–15} New biological therapies, such as the anti-tumour necrosis factor-alpha (anti-TNF- α), are increasingly used to treat IBD.^{16–18}

5-Aminosalicylic acid drugs

5-ASA drugs are used in the management of mild active IBD. Female fertility is unaffected by their use. Sulfasalazine and sulfapyridine cross the placenta and fetal concentrations are similar to maternal levels. 5-ASA has limited placental transfer. No increase in congenital abnormalities has been identified with the use of 5-ASA in pregnancy.¹³ A prospective case-control study¹⁴ identified 165 women with IBD who used 5-ASA either throughout pregnancy (72%), in the first trimester only (17%) or after organogenesis (11%). No increase in fetal abnormalities or spontaneous abortion was shown.¹⁴ Sex steroid hormones do not appear to interact with 5-ASA drugs.¹⁹

Corticosteroids

Corticosteroids are anti-inflammatory drugs used by most IBD sufferers at some time.¹ Corticosteroids are metabolised in the placenta and the fetus is exposed to only 10% of the maternal dose. There is no evidence that corticosteroids are teratogenic in humans or that they reduce fertility.¹³ Side effects in pregnancy are similar to those in non-pregnant women and include: immunosuppression, avascular necrosis of bone, osteopenia, hypertension and hyperglycaemia. Combined oral contraceptives (COCs) may increase plasma concentration of corticosteroids,¹⁹ but no evidence was identified to suggest this is clinically relevant.

Cyclosporin

This drug is used in the management of severe disease. Studies of women using cyclosporin for rheumatoid

conditions show no increase in congenital abnormalities. The long-term effects of cyclosporin in pregnancy, however, are unknown and adequate contraception is therefore advised. Sex steroid hormones may increase plasma levels of cyclosporin.¹⁹

Azathioprine

Azathioprine is used in the management of chronic active disease and, if effective, can be continued safely.²⁰ Azathioprine crosses the placenta but the fetal liver lacks the enzymes that are required to convert it into active metabolites. Although this appears to protect the fetus from teratogenic effects in early pregnancy, the later effects on the fetal immune system are unknown and contraception should be advised for women using azathioprine. A small, retrospective case study¹⁵ investigated the use of azathioprine (alone or in combination with 5-ASA or corticosteroids) throughout pregnancy. No increase in congenital abnormalities was identified. Sex steroid hormones do not appear to interact with azathioprine.¹⁹

Methotrexate

Methotrexate is known to be teratogenic and effective contraception is essential for women using it. It is a folate antagonist and folic acid supplementation prevents methotrexate toxicity.²¹ Methotrexate does not affect fertility. Women using methotrexate who wish to become pregnant should discontinue treatment under medical supervision at least 3 months before stopping contraception¹³ and continue the use of folic acid. Sex steroid hormones do not appear to interact with methotrexate.¹⁹

Antibiotics

Antibiotics may be required to treat IBD complications or following surgery. A recent non-systematic review of interactions between broad-spectrum (non-enzyme-inducing) antibiotics and COC highlights the lack of evidence regarding antibiotics and COC efficacy.²² Ethinylloestradiol undergoes extensive metabolism in its first pass through the gastrointestinal tract and liver. Inactive metabolites are excreted into the bile, and during the second pass through the GI tract breakdown of metabolites by gut bacteria releases more ethinylloestradiol, which is reabsorbed. There is marked individual variation in the bioavailability of ethinylloestradiol following oral administration and the impact of this enterohepatic circulation on serum hormone levels and efficacy is unclear.²³ Short-term (less than 3 weeks) and long-term (more than 3 weeks) antibiotics may alter gut flora and pregnancies have been documented following their use in women using COCs.²² Two small, prospective, randomised-controlled trials investigated the effects of antibiotics (ciprofloxacin and ofloxacin) on markers of ovulation in women using COCs and found no evidence of ovulation.^{24,25} Despite lack of evidence of the effects of antibiotics on gut flora, additional contraception is advised when starting a new broad-spectrum, non-enzyme-inducing antibiotic and for 7 days after discontinuation in keeping with previous Faculty Guidance.²⁶ Women who are established on a non-enzyme-inducing antibiotic long-term do not require additional contraception unless they change to a different antibiotic. Oral progestogen-only pills (POPs) do not undergo an enterohepatic circulation.²³ Additional contraception is not required when women who are using progestogen-only methods are prescribed non-enzyme-inducing antibiotics for any duration.

Anti-tumour necrosis factor alpha (anti-TNF- α)

Anti-TNF- α antibody (infliximab) is increasingly being used in the treatment of IBD.^{16–18} Few serious side effects have been documented²⁷ but more studies are needed to determine optimal doses, possible combination therapy, long-term benefits, side-effects and teratogenicity.

Complementary therapies

A UK population-based survey identified that complementary therapies or self-care remedies purchased over the counter were used by 28.3% of the population. This increased to 46.6% for lifetime use.²⁸ An observational study of 239 IBD patients attending a medical clinic identified similar use (43%) of herbal remedies.²⁹ Aloe vera gel was the most common herbal remedy used by almost a third of patients in this study. There have been no case reports of interactions between oral aloe vera gel and contraceptive hormones. Only one herbal remedy, St John's Wort, can potentially reduce the efficacy of oral contraception due to its effect on liver enzymes³⁰ and can increase the bioavailability of cyclosporin.³¹

Recommendations

3 Effective contraception must be used while taking methotrexate, and for at least 3 months after its discontinuation (Grade C).

4 Women using COC should use additional contraception while taking non-enzyme-inducing antibiotic courses of less than 3 weeks and for 7 days after they are discontinued (Grade C).

5 COC users who are established on non-enzyme-inducing antibiotics for more than 3 weeks do not require additional contraception unless they change to a different antibiotic (Grade C).

6 Women using progestogen-only methods of contraception do not need additional contraceptive protection when taking non-enzyme-inducing antibiotics for any duration (Grade C).

How does surgery for IBD affect fertility and pregnancy?

Surgery may be indicated in up to 30% of women with IBD at some time during the course of the disease. At least half of patients with CD require surgery in the first 10 years after diagnosis and 1 in 12 may need two or more operations.¹ A retrospective study identified that fertility problems were more common in women with IBD who had surgery than in those who did not require surgery.¹¹ One retrospective, case-control study investigated the effects of elective reconstructive surgery on fertility.³² Women with UC were compared to women without UC, before and after surgery. Fertility was found to be reduced following surgery. This possible reduction in fertility following surgery may influence a woman's decision regarding the timing of childbearing and should be discussed.

Most IBD surgery is performed as an emergency procedure for toxic megacolon, perforation, haemorrhage or carcinoma, or when medical management fails. In these situations surgery cannot realistically be postponed until after childbearing.

Fertility may be affected in women with IBD following rectal excision, pelvic sepsis or fistula and abscess formation due to adhesion, scarring and tubal damage. No studies were identified investigating the risk of tubal damage and ectopic pregnancy in women with IBD. Ectopic pregnancy may present with GI symptoms, which

was highlighted in the *Confidential Enquiries into Maternal Deaths in the United Kingdom*, and clinicians should consider ectopic pregnancy in the differential diagnosis of abdominal pain in sexually active women with IBD.³³

Recommendations

✓ The risk of subfertility following surgical intervention should be discussed with women with IBD as this may influence decisions regarding the timing of childbearing.

✓ Clinicians should consider ectopic pregnancy in their differential diagnosis of abdominal pain in sexually active women with IBD.

How does pregnancy affect IBD?

The general course of IBD in pregnancy may be affected by disease activity before conception,³⁴ thus highlighting the importance of preconception counselling and pregnancy planning. However, most women with inactive or mild disease have no worsening of disease during pregnancy.³⁴ A retrospective study did not demonstrate disease relapse during pregnancy in women with IBD.¹¹

Recommendation

✓ Appropriate referral for pre-pregnancy counselling should be available to all women with IBD to optimise management before conception.

How might IBD affect contraceptive use?

Women who have undergone colectomy with ileostomy do not appear to have alteration in serum sex steroid hormone levels.³⁵ No clinical studies, however, were identified that assess efficacy of hormonal contraception in women with IBD. Absorption is unlikely to be affected in large bowel disease and the efficacy of oral contraception should not be reduced. The efficacy of oral contraception may potentially be reduced in women with CD who have small bowel disease and malabsorption. In addition, the general advice for women using oral contraception who have vomiting or severe diarrhoea for more than 24 hours is to follow instructions for missed pills.³⁶ No evidence was identified to suggest that the efficacy of progestogen-only injectables, subcutaneous implants or intrauterine methods is reduced in women with small bowel disease and malabsorption.

Recommendation

✓ Women should be advised that the efficacy of oral contraception is unlikely to be reduced by large bowel disease but may potentially be reduced in women with CD who have small bowel disease and malabsorption.

How might extra-intestinal manifestations of IBD affect contraceptive use?

IBD may be associated with other disorders: venous thromboembolism (VTE), hepatobiliary disease and osteoporosis. Professionals should take these co-existing disorders into consideration when prescribing contraception and refer to the World Health Organization (WHO) *Medical Eligibility Criteria for Contraceptive Use*.³⁷

Thromboembolic disease

Women with IBD are thought to be at increased risk of VTE.^{38,39} This increased risk does not appear to be due to an increase in prothrombotic mutations, such as factor V

Leiden. Two small, prospective, case-control studies^{40,41} did not identify an increased incidence of prothrombotic mutations in patients with IBD compared to the general population. Women who have IBD and are hospitalised are at moderate risk of VTE.³⁸ The incidence of deep vein thrombosis in moderate risk groups is estimated at between 10% and 40% with a 0.1% to 1.0% risk of fatal pulmonary embolism.³⁸ It is unclear if this risk is only related to disease severity, immobilisation or surgery.

Hepatobiliary disease

Primary sclerosing cholangitis is a chronic cholestatic liver disease characterised by fibro-obliterative inflammation of the hepatic bile ducts leading to progressive cirrhosis and hepatic failure.⁴² This is the most common hepatobiliary disorder associated with IBD and up to 70% of patients with primary sclerosing cholangitis have IBD.

Osteoporosis and osteopenia

The results of studies of bone mineral density (BMD) in patients with IBD have been inconsistent, reflecting differences in disease activity, severity and site and also in study design. In general, osteopenia or osteoporosis is more common in patients with IBD than in the general population.¹² The aetiology of bone loss in patients with IBD is not entirely clear but factors such as corticosteroid use, disease activity, malnutrition, physical inactivity and vitamin D deficiency have been implicated.¹² Despite this conflicting evidence, overall, osteoporosis appears to be most common in CD and to a lesser extent UC. The British Society of Gastroenterology guidance for osteoporosis in IBD¹² suggests that measurement of bone density is most useful in postmenopausal women with IBD, but can be considered if systemic steroids are used, or in those with fragility fractures.

Recommendations

7 Co-existing disorders in women with IBD should be considered when assessing eligibility for contraceptive use (Grade C).

✓ Women with IBD who have additional risk factors for osteoporosis should have BMD measured.

How might surgery for IBD affect contraceptive use?

Women with IBD who are hospitalised are considered a moderate risk group for VTE^{38,39} and this risk is further increased with major surgery and immobilisation. The risk of postoperative VTE is increased from 0.5% to 1.0% for all COC users compared to non-users.⁴³ However, the absolute risk of VTE remains small and the decision to stop COC preoperatively should take into account risk factors, risks of unintended pregnancy and patient choice.³⁹ In women with IBD, COC should be stopped at least 4 weeks before elective major surgery. Counselling and provision of alternative methods is important (Table 1). Advice regarding recommencing the COC should be given individually. Women using progestogen-only methods are not at an increased risk of VTE⁴⁴ and need not discontinue them prior to surgery.³⁷

Recommendations

✓ Women with IBD should stop COC at least 4 weeks before major elective surgery and alternative contraception should be provided.

✓ Women with IBD using progestogen-only contraception need not discontinue it prior to major elective surgery.

Table 1 Advice regarding switching from COC to another method³⁶

Switching from COC to:	Advice
POP	Can be started immediately if the COC has been used consistently and correctly, or if it is otherwise reasonably certain there has been no risk of pregnancy. Additional barrier contraception is required for 2 days, only if fewer than seven COC pills have been taken.
DMPA injectable contraception	The first injection can be given immediately if the COC has been used consistently and correctly, or if it is otherwise reasonably certain there has been no risk of pregnancy. Additional barrier contraception is required for 7 days, only if fewer than seven COC pills have been taken.
Progestogen-only	Can be inserted immediately if the COC implants has been used consistently and correctly, or if it is otherwise reasonably certain there has been no risk of pregnancy. Additional barrier contraception is required for 7 days, only if fewer than seven COC pills have been taken.
Copper-bearing IUD	Can be inserted immediately if the COC has been used consistently and correctly, or if it is otherwise reasonably certain the woman is not pregnant. No additional contraception is required.
Levonorgestrel-releasing IUS	Can be inserted immediately if the COC has been used consistently and correctly, or if it is otherwise reasonably certain the woman is not pregnant. Additional barrier contraception is required for 7 days, only if fewer than seven COC pills have been taken.
Barrier methods	COC can be discontinued and barrier methods used immediately. Advice should be given on how and when to access EC should barrier methods fail.

COC, combined oral contraception; DMPA, depot medroxyprogesterone acetate; EC, emergency contraception; IUD, intrauterine device; IUS, intrauterine system; POP, progestogen-only pill.

What are the contraceptive options for women with IBD?

Contraceptive options for women with IBD who fulfil the WHO *Medical Eligibility Criteria for Contraceptive Use* are the same as for women without IBD. Women with IBD who are especially at an increased risk of VTE, or who have co-existing disease such as primary sclerosing cholangitis and osteoporosis, may not fulfil medical eligibility criteria. The efficacy of oral methods may be reduced in women with small bowel disease due to malabsorption. The risks and benefits of all contraceptive options should be discussed individually.

Combined oral contraception (COC)

COC can be used by women with IBD who fulfil the WHO *Medical Eligibility Criteria for Contraceptive Use*.³⁷

VTE risk. No evidence was identified specifically relating to the VTE risk of COC users with IBD. The risk of VTE for women generally using a second-generation COC (containing norethisterone or levonorgestrel) is increased three-fold to 15 per 100 000. Use of a third-generation COC (containing desogestrel or gestodene) increases the risk to 25 per 100 000.^{45–48} The WHO *Medical Eligibility Criteria for Contraceptive Use* classify COC use by women with a personal history of VTE, or undergoing major surgery with immobilisation, as Category 4 (the method should not be used).³⁷

Primary sclerosing cholangitis. The COC should not be used in women with primary sclerosing cholangitis (WHO Category 4).³⁷

Osteoporosis and osteopenia. Women with IBD have osteopenia or osteoporosis more commonly than the general population. No studies have specifically investigated the use of COC in women with IBD and its effects on osteoporosis. The COC may have a protective effect on age-related loss of BMD.⁴⁹ Further evidence to support this has been provided by a recent, small, prospective, cross-sectional study in low-dose COC users.⁵⁰ However, other recent cross-sectional studies have failed to identify any changes in BMD with COC use.⁵¹

Progestogen-only pills

Women with IBD who fulfil medical eligibility criteria can use the POP.³⁷ The POP can be used by women with a personal history of VTE, or who are undergoing major surgery with prolonged immobilisation (WHO Category 2 – benefits outweigh the risks).³⁷ Women with primary sclerosing cholangitis should not use the POP (WHO Category 3 – risks outweigh the benefits).³⁷

Progestogen-only injectables

Women with IBD, who fulfil medical eligibility criteria, can use injectable progestogen-only contraceptives (depot medroxyprogesterone acetate, DMPA).³⁷ DMPA can be used by women with a personal history of VTE, or who are undergoing major surgery with prolonged immobilisation (WHO Category 2).³⁷ Women with primary sclerosing cholangitis should not use DMPA (WHO Category 3).³⁷

Bone mineral density. The WHO *Medical Eligibility Criteria for Contraceptive Use* do not specifically refer to the use of DMPA in women with known risk factors for osteoporosis.³⁷ No studies were identified which investigated the use of DMPA by women with IBD and its effects on BMD. Many studies however, have investigated the effects of DMPA on bone density in women generally, and these have been summarised in two non-systematic reviews.^{52,53} Cross-sectional studies suggest that DMPA is associated with a reduction in BMD at specific sites (spine, femur and radius) and this is related to duration of use.⁵² Two prospective studies have provided further evidence to support this association.^{50,54}

The role of dual X-ray absorptiometry (DEXA) in measuring BMD in women using DMPA is unclear. Previous expert opinion⁵³ has suggested that women who use DMPA may be referred for bone densitometry screening if they have risk factors for osteoporosis such as heavy smoking, low body mass index (BMI), amenorrhoea, corticosteroid use, thyroid disease or family history. Women with IBD are likely to fall into this category. A cross-sectional study⁵⁵ identified corticosteroid use as a predictor of low BMD but a significant number of patients with IBD who have never used corticosteroids also have osteopenia or osteoporosis. Malabsorption may also increase the risk of low BMD.

Low BMD is usually asymptomatic unless women present with fractures. Only one study has measured the burden of fracture in patients with IBD.⁵⁶ This population-based, matched, cohort study compared patients with IBD to age- and gender-matched patients without IBD. A significant increase in the incidence of fractures in IBD patients, similar in both men and women, was identified with an incidence rate ratio (IRR) 1.41 (95% CI 1.27–1.56). If women with IBD are considering the use of DMPA, measurement of BMD is recommended. If BMD is low then an alternative contraceptive method should be discussed.

Fertility. A prospective cohort study of women discontinuing DMPA identified a median delay to

conception of approximately 9 months from the date of their last injection.⁵⁷ No direct evidence was identified regarding return to fertility specifically in women with IBD who discontinue DMPA.

Progestogen-only implants

Women with IBD who fulfil medical eligibility criteria can use progestogen-only implants.³⁷ No studies were identified specifically relating to implant use in women with IBD. The WHO classifies implant use (specifically Norplant) in women with a personal history of VTE, or undergoing major surgery with prolonged immobilisation, as WHO Category 2. Women with primary sclerosing cholangitis should not use implants (WHO Category 3).³⁷

Progestogen-releasing intrauterine system (IUS)

Women with IBD who fulfil medical eligibility criteria can use the IUS.³⁷ No studies were identified which specifically investigated IUS use and IBD. Women with a personal history of VTE or undergoing major surgery with prolonged immobilisation can use an IUS (WHO Category 2).³⁷ Women with primary sclerosing cholangitis should not use this method (WHO Category 3).³⁷

Copper-bearing intrauterine device (IUD)

Women with IBD who fulfil medical eligibility criteria can use an IUD.³⁷ An IUD can safely be used by women with a history of, or current, VTE or with primary sclerosing cholangitis (WHO Category 1 – unrestricted use).³⁷ Although pelvic infection should be considered in the differential diagnosis of abdominal pain in sexually active women with IBD, an increase in pelvic infection only occurs in the 21 days following IUD insertion.⁵⁸ There is no subsequent increase in pelvic infection unless there is exposure to sexually transmitted infections. Studies on pelvic infection and the IUD, however, are not specific to women with IBD.

Barrier methods

Women with IBD may choose barrier methods of contraception – condoms, cervical caps and diaphragms. The typical user failure rates may make these methods inappropriate for use by women who are using teratogenic drugs. Women using barrier methods should be given information regarding emergency contraception (EC).

Laparoscopic sterilisation

Sterilisation via laparoscopy is an inappropriate method of contraception for women who have had previous abdominal or pelvic surgery. The Collaborative Review of Sterilisation concluded, in a large, prospective, multicentre, cohort study, that women who had previous abdominal or pelvic surgery were twice as likely to develop complications following laparoscopic sterilisation than women who had had no previous surgery (OR 2.0, 95% CI 1.4–2.9).⁵⁹ Female sterilisation is a permanent method of contraception with failure rates (1 in 200) that are higher than those for some of the reversible methods.⁶⁰ Women should be counselled regarding alternative methods, including vasectomy. Newer methods of hysteroscopic sterilisation are being evaluated.⁶¹ If abdominal surgery is indicated for women with IBD who wish sterilisation, this may be performed at the time of other surgery if appropriate preoperative counselling has been provided.

Emergency contraception (EC)

EC provides a means of preventing pregnancy following unprotected sexual intercourse or potential contraceptive failure.⁶² Two methods, progestogen-only emergency contraception (POEC) and the IUD, can be used. The

Table 2 A quick reference to contraceptive provision for women with IBD

Contraceptive method	Issues specific to IBD	Patient discussion points
COC	Broad-spectrum non-enzyme-inducing antibiotics Cyclosporin Major elective surgery Colectomy Small bowel involvement or malabsorption BMD VTE Liver disease	May reduce COC efficacy Serum levels increased with COC Stop COC at least 4 weeks before surgery COC absorption is unaffected COC absorption may be reduced No effect or a potential increase in BMD COC can be used unless current or previous VTE Contraindicated in primary sclerosing cholangitis
POP	Major surgery Small bowel involvement or malabsorption Liver disease	No need to discontinue POP absorption may be reduced Contraindicated in primary sclerosing cholangitis
DMPA	BMD Liver disease Fertility	A DEXA scan is recommended before initiation Contraindicated in primary sclerosing cholangitis Delay in return to fertility
Progestogen-only implants	Small bowel involvement or malabsorption BMD Liver disease	No effect No effect Contraindicated in primary sclerosing cholangitis
Levonorgestrel-releasing IUS	Small bowel involvement or malabsorption BMD Liver disease	No effect No effect Contraindicated in primary sclerosing cholangitis
Copper-bearing IUD		May be a suitable method of contraception for women who wish a longer-term option
Laparoscopic sterilisation	Associated with increased complications in women who have had previous abdominal or pelvic surgery	Consider at the time of elective surgery in women who have been fully counselled
Barrier methods	Failure rates may make them inappropriate alone in women who are using potentially teratogenic drugs or whose disease is poorly controlled	
Progestogen-only EC		Generally the dose should be the same as for women without IBD

BMD, bone mineral density; COC, combined oral contraception; DEXA, dual X-ray absorptiometry; DMPA, depot medroxyprogesterone acetate; EC, emergency contraception; IBD, inflammatory bowel disease; IUD, intrauterine device; IUS, intrauterine system; POP, progestogen-only pill; VTE, venous thromboembolism.

regimen for POEC for women with IBD is the same as that recommended for women generally.⁶²

Table 2 represents a quick reference guide, which summarises these issues regarding contraception for women with IBD.

Recommendations

8 Women with IBD should be offered the same contraceptive choices as women without IBD. Certain contraceptive methods may have specific cautions for disorders associated with IBD (Grade C).

9 Women with UC can use oral contraception (Grade C).

10 Women with CD who have small bowel involvement or malabsorption may have a reduced efficacy of oral contraception (Grade C).

11 Women with IBD with low bone density or who have had repeat courses of corticosteroids or malabsorption should be advised against the use of DMPA (Grade C).

12 Laparoscopic sterilisation is an inappropriate method of contraception for women with IBD who have had previous pelvic or abdominal surgery (Grade B).

✓ Barrier methods may be inappropriate for women with IBD who are using potentially teratogenic drugs or in whom disease is active and severe.

Does contraceptive use influence IBD?

One prospective, case-control study suggested women using oral contraception are twice as likely to develop IBD as women not using oral contraception.⁶³ A large, prospective, cohort study,⁶⁴ however, indicated that current oral contraceptive use had no effect on CD activity. Further case-control studies have provided evidence to support this finding.^{65,66} Smoking significantly increased the risk of CD relapse, but the use of COC did not further increase this risk.⁶⁴

Recommendation

13 Women can be reassured that a pathogenic role for COC in IBD is unsubstantiated (Grade B).

How does IBD affect self-esteem, self-image and psychosexual health?

Three relevant studies on these issues were identified.^{67–69} A case-control study indicated that depression and anxiety were significantly more prevalent in patients prior to a diagnosis of IBD.⁶⁷ Many of these cases were also identified within the year after diagnosis of IBD. A prospective cohort of 62 patients with UC, in remission for at least 2 months and on oral medication, was followed up for 45–65 months.⁶⁸ A link has been postulated between stress prior to the diagnosis of IBD and onset of disease, but this has not been substantiated. A retrospective study investigated the effects of proctocolectomy for UC or polyposis coli on sexual function.⁶⁵ Overall most women in this study experienced enhanced sexual function postoperatively, which was attributed mainly to improved health.

A non-systematic review of the impact of IBD on relationships and sexual health highlights the lack of

research in this area.⁷⁰ Sexuality is not routinely discussed in a clinical environment and health professionals and patients may be wary of raising these issues. Chronic fatigue, frequent defaecation, loss of bowel control, perianal disease and dyspareunia may all lead to psychological morbidity. Following pelvic surgery, dyspareunia and altered body image may cause problems. Small studies have indicated that sexual function can either improve or worsen with surgery. Poor sexual relationships between partners before surgery contribute to problems postoperatively.

Recommendation

✓ **Health professionals should provide an opportunity for women to discuss issues relating to sexuality and body image and know where to refer locally when appropriate.**

How might a multidisciplinary approach improve IBD management?

Nurse specialists, information and support groups, and counselling have been shown to complement physician-led treatment.^{71–76} British Society of Gastroenterology Guidance on IBD highlights the need for health care professionals to have a good knowledge of disease management and an understanding of the social and emotional impact of disease for patients and their families.¹ A cross-sectional study of patients attending a GI and general medical outpatient department identified that only 20% of patients with IBD were members of the National Association for Colitis and Crohn's Disease.²⁹

Recommendation

✓ **Managed clinical care pathways should be developed locally to promote integrated working between different service providers to ensure that all reproductive health care needs of women with IBD are met.**

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This Guidance was developed by the Clinical Effectiveness Unit (CEU) of the Faculty of Family Planning and Reproductive Health Care (FFPRHC): Gillian Penney (Director), Susan Brechin (Senior Lecturer/Unit Co-ordinator) and Alison de Souza (Research Assistant) in consultation with the Clinical Effectiveness Committee, which includes service user representation and an Expert Group of Health Care Professionals involved in Family Planning and Reproductive Health Care. The Expert Group comprised: Toni Belfield (Director of Information, fpa, London); Christine Finlay (Stoma Care Nurse, Foresterhill Health Centre, Aberdeen); Louise Kane (Specialist Registrar in Public Health, Wolverhampton City PCT/FFPRHC Education Committee Member); Ruth McKee (Consultant Colorectal Surgeon, Glasgow Royal Infirmary); Perminder Phull (Consultant Gastroenterologist, Aberdeen Royal Infirmary); Ros Tolcher (Consultant Family Planning and Reproductive Health/Clinical Director, Contraception and Sexual Health Service, Southampton); Steve Twaddle (General Practitioner, Abronhill Health Centre, Cumbernauld). We would like to acknowledge the support of Vicki Brace (Clinical Research Fellow, Scottish Programme for Clinical Effectiveness in Reproductive Health, SPCERH) and Martin Cameron (Clinical Research Fellow, SPCERH).

This guidance is also available online at www.ffprhc.uk. Evidence tables are available on the FFPRHC website. These summarise relevant published evidence on inflammatory bowel disease, which was identified and appraised in the development of this Guidance. The clinical recommendations within this Guidance are based on evidence whenever possible.

Grades of Recommendations	
A	Evidence based on randomised-controlled trials (RCTs)
B	Evidence based on other robust experimental or observational studies
C	Evidence is limited but the advice relies on expert opinion and has the endorsement of respected authorities
✓	Good Practice Point where no evidence exists but where best practice is based on the clinical experience of the Expert Group

Electronic searches were performed for: MEDLINE (CD Ovid version) (1996–2003); EMBASE (1996–2003); PubMed (1996–2003); the Cochrane Library (to 2003) and the US National Guideline Clearing House. The searches were performed using relevant medical subject headings (MeSH), terms and text words. The Cochrane Library was searched for systematic reviews, meta-analyses and controlled trials relevant to emergency contraception. Previously existing guidelines from the FFPRHC, the Royal College of Obstetricians and Gynaecologists (RCOG), the World Health Organization (WHO) and reference lists of identified publications were also searched. Similar search strategies have been used in the development of other national guidelines. Selected key publications were appraised according to standard methodological checklists before conclusions were considered as evidence. Evidence was graded as above, using a scheme similar to that adopted by the RCOG and other guideline development organisations.