Unplanned pregnancy in a woman with Crohn disease

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Patients with inflammatory bowel disease (IBD) and bowel resection might experience reduced effectiveness from oral contraceptive agents. We report a case of a woman with Crohn disease who became pregnant while compliant with her combined oral contraceptive pill (OCP) regimen. Patients with Crohn disease have a greater risk of contraceptive failure because the diseased bowel causes increased passage of stool and malabsorption. This report describes some of the special needs and pitfalls surrounding contraception for patients with IBD. Family physicians routinely oversee their patients’ contraceptive needs, and it is important to understand that patients with IBD require additional attention.

Case

A 40-year-old white homemaker presented to the emergency department with an 8-week history of amenorrhea, abdominal distension, and diarrhea. She was diagnosed with Crohn disease following an intestinal biopsy 9 years ago, and she believed this was a recurrence. She had 2 children, one 12 and the other 10 years old. She was taking a 30-µg OCP prescribed by her family physician.

When initially diagnosed, she received prednisolone and sulfasalazine. She had recently taken a few courses of broad-spectrum antibiotics. She was not taking any maintenance drugs, as she was in remission. Her periods were irregular and light, and she had not always seen a withdrawal bleed despite compliance with her OCP regimen. She was slim and slightly pale. A 28-week-sized uterus was felt on palpation. Pregnancy test results were positive, and a sonogram confirmed a viable 27-week-and-4-day-old fetus.

The patient was upset about the unplanned, unwanted pregnancy. She was concerned about the risk of Down syndrome and initially wanted to discuss termination. After counseling by the obstetrician and health psychologist, she accepted the situation. She was keen to undergo amniocentesis, which was arranged under steroid cover and neonatal department input at 30 weeks’ gestation. Karyotype analysis revealed normal results. She delivered a 2.8-kg baby girl at 38 weeks. The patient was fitted with a levonorgestrel-releasing intrauterine device (IUD) at 6 weeks postpartum.

Discussion

The PubMed database was searched and references relevant to the case report were included.

Crohn disease can affect the entire gastrointestinal tract or present with skip lesions. Clinical symptoms reflect the site of disease. The transmural inflammation might lead to fibrosis, bowel obstruction, or to sinus tract and fistula formation.1 Interestingly, Canada has one of the highest rates of IBD in the world, with a prevalence of 0.60% of the population. The average incidence of Crohn disease in Canada is approximately 16.3 per 100 000 people.1

The OCP is mainly absorbed in the small bowel, and effectiveness depends on absorptive capability.1 Reduced bioavailability of estrogen and progesterogens in patients with malabsorption, chronic diarrhea, increased stool

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passage, or surgical complications can affect the effectiveness of contraceptives. This is not as manifest with ulcerative colitis, which affects the large bowel. Crohn disease, particularly involving the ileum and jejunum, can have an effect on the bioavailability of OCPs. Studies assessing the bioavailability of estrogens and progestogens in IBD are limited. Some studies have been conducted in patients with gastric bypass and bowel resection.

Broad-spectrum antibiotics are frequently necessary to treat complications of IBD. Although the effect of OCP use in conjunction with antibiotics is not clear, breakthrough bleeding or contraceptive failure have been reported. Oral contraceptive pills in combination with antibiotics must be used cautiously, as disruption of gut flora along with impaired absorption might cause contraceptive failure.

Possible mechanisms for contraceptive failure include diminished enterohepatic recirculation due to elimination of bacteria that regenerate active estrogens from conjugated estrogens, induction of liver cytochrome P450 enzymes, or increased fecal elimination secondary to antibiotic-induced diarrhea. Patients with Crohn disease might be at greater risk secondary to increased passage of stool and diseased bowel involvement.

The Faculty of Family Planning and Reproductive Health Care in the United Kingdom recommends that patients with IBD who take OCPs should use additional contraception while taking nonenzyme-inducing antibiotics for a duration of less than 3 weeks, and should continue to do so for 7 days after stopping the antibiotics. Additional contraception is not needed for those established on antibiotics for more than 3 weeks unless they are switched to a different antibiotic or for those using progesterone-only contraceptive pills.

Prevention of pregnancy is especially important for patients with IBD because certain immunosuppressive agents used for treatment are teratogenic. Women need to be counseled, as additional protection might be necessary. The recent trend toward decreased doses of estrogen in OCP preparations makes it important that prescribers consider additional factors that might further reduce the bioavailability of steroids and thus compromise contraceptive protection. Extra-intestinal manifestations of IBD must also be taken into account when assessing eligibility for contraceptive use. Studies have shown that patients with IBD are at increased risk of venous thromboembolism, osteoporosis, and hepatobiliary disease.

At least 50% of patients with Crohn disease might require surgery within 10 years of diagnosis. Hospitalized patients with IBD are at moderate risk of venous thromboembolism, and this risk is increased when the patients are immobilized postoperatively. Oral contraceptive pills will further increase this risk and therefore the Faculty of Family Planning and Reproductive Health Care recommends that OCPs be discontinued at least 4 weeks before a serious elective surgery and alternative contraception be provided.

The effectiveness of OCPs might potentially be reduced in women with Crohn disease who have small-bowel involvement and malabsorption. The general advice for women using OCPs who have vomiting or severe diarrhea for more than 24 hours is to follow instructions for missed pills. The use of injectables, implants, IUDs, and laparoscopic sterilization might be appropriate; however, special considerations must be made. Intratracheal devices are effective, but they should not be used in the presence of rectal or vaginal fistulae. It is unknown if their use contributes to fistula formation, but copper IUDs cause increased menstrual flow and can contribute to anemia. Depot contraception must also be used with care in patients taking chronic steroids for their disease, as bone marrow density can be affected. A dual-energy x-ray absorptiometry scan is recommended before the initiation of depot contraception. Laparoscopic sterilization might carry risk of bowel perforation in women with previous bowel surgery, and hysteroscopic sterilization using the Essure procedure or male vasectomy might be alternative options for couples wishing to choose a permanent method.

Conclusion

The prevention of pregnancy in patients with IBD and chronic diarrhea can be challenging. Inflammatory bowel disease usually presents in the reproductive years and hence affects contraceptive needs. Unplanned motherhood is not without its stresses. The use of barrier methods in addition to correct contraceptive advice will enhance the effectiveness of contraceptives in all these women.

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Competing interests
None declared

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