

COMPLICATIONS OF IBD

What is meant by the term 'complications'?

A complication is defined as a disease that arises as a consequence of another. In IBD, the main underlying problem is inflammation of parts of the gastrointestinal tract. Appropriate treatment leads to an improvement of the inflammation, the symptoms and signs of IBD lessen and may disappear and the person feels better. In some people, there may be no improvement in gastrointestinal inflammation at all with treatment, or the disease may advance despite treatment, or there may be symptoms and signs of disease outside the gastrointestinal tract. This is known as complicated disease.

Complications of IBD can be divided into 2 types:

- those related to the intestine itself – often called 'local' or 'intra-intestinal' complications, and
- those outside the intestine – often called 'systemic' or 'extra-intestinal' complications.

How common are complications of Crohn's disease and ulcerative colitis?

Complications are by no means inevitable or even frequent, especially in appropriately treated patients. However, they are sufficiently common and diverse that it is important for patients and physicians to be acquainted with them. Early recognition often means effective treatment.

What are some of the more important complications of IBD?

The most important (and serious) complication is toxic megacolon where the colon becomes markedly dilated and inflamed. The patient becomes acutely ill with fever, abdominal pain, diarrhoea, and possible vomiting. It can result in perforation (a hole in the bowel) and peritonitis and can be fatal. Emergency surgery is usually necessary. 2-10% of patients with severe ulcerative colitis experience toxic megacolon while in Crohn's disease, it is quite rare.

Strictures are localised areas of narrowing and are much more common in Crohn's disease. Bowel obstruction due to strictures is most common in small-bowel Crohn's disease.

Other common complications include perforation, abscesses and fistulas (Crohn's disease only), bleeding and anaemia, anal skin tags (soft lumps on the edge of the anus and fissures (cracks in the skin of the anus), and haemorrhoids.

What is the approximate percentage of patients with IBD who would be expected to develop one of the above complications?

The complication rate in ulcerative colitis is 10-20%. Thus, about 80-90% of ulcerative colitis patients respond satisfactorily to medical treatment and never develop any complications.

In Crohn's disease the complication rate is higher, about 25% have strictures, while the range is 20-60% for fistulas.

What are the most common intestinal complications of IBD?

Partial obstruction of the intestine is probably the most common complication occurring in approximately 50% of Crohn's disease patients. Affected patients may complain of severe crampy pain in the mid-abdomen. They may note that the abdomen gets distended or bloated at the same time. Vomiting occurs with severe obstruction.

Does partial obstruction as described above, always lead to surgery?

No. Surgery is only necessary in patients with severe obstruction. In less severe cases, medical treatment alone will reverse the partial obstruction, relieve the symptoms, and permit the patient to eat normally again.

What are fistulas?

A fistula is an abnormal passage, such as from one loop of intestine to another or from intestine to the skin. Fistulas are relatively common in Crohn's disease and rare in ulcerative colitis. Because the inflammatory process involves the full thickness of the intestine in Crohn's disease, the usually smooth outside surface of the intestinal loops becomes rough and sticky and adheres to neighbouring structures. The inflammation may spill over into adjacent areas and lead to the production of abnormal passages or fistulas. Fistulas may lead to abscesses (collections of pus). In many instances surgical incision and drainage may be needed. If the fistula is small, medical treatment alone may be sufficient to control it and bring about its closure and healing.

What is meant by systemic complications of IBD?

These refer to those problems that affect the patient as a whole rather than the bowel locally. Fever is perhaps the most common, and is a reaction of the body to inflammation in general. Anaemia can lead to symptoms of tiredness and feeling faint. At times, other organs of the body, that are not part of the gastrointestinal tract, can show abnormalities. These are called extra-intestinal manifestations.

What are the common extra-intestinal manifestations of IBD?

Although the main site of inflammation in IBD is in the gastrointestinal tract, the disease can also cause symptoms to appear in other parts of the body. The reasons for these 'extra-intestinal' manifestations are unknown, but are thought to relate to a generalised abnormal response of the immune system. Extra-intestinal manifestations may also be a side effect of medications used to treat IBD and, particularly in Crohn's disease, may arise because of malabsorption from the small intestine.

The types of extra-intestinal manifestations associated with IBD include:

- arthritis
- bone loss
- eye disorders

- kidney disorders
- liver disease
- skin disorders
- malabsorption and malnutrition

Arthritis

Inflammation in the joints (arthritis) is the most common extra-intestinal complication of IBD, affecting approximately 25 per cent of people. Arthritis may occur as a peripheral arthritis which affects the joints in the arms and legs; axial arthritis which affects the lower spine and sacroiliac joints; and more rarely, ankylosing spondylitis which is a type of axial arthritis that can also be associated with inflammation in the eyes, lungs and heart valves.

Bone Loss

Low bone density is seen in 30 to 60 per cent of people with IBD. The causes of bone loss include the long-term use of corticosteroids, inflammation during periods of active disease and to a lesser extent vitamin D deficiency (especially in people with small bowel Crohn's disease or in those who have had a part of their small intestine surgically removed). The bone loss can take the form of osteoporosis (porous bones), osteopenia (low bone density) or osteomalacia (softening of the bones). Over time, bone loss leads to weaker bones that may eventually break, most often in the spine and hips. Routine bone density examination should be considered.

Eye Disorders

About 10 per cent of people with IBD experience eye problems. The common types of eye disorders are: uveitis (painful inflammation of the middle layer of the eyeball); keratopathy (white deposits at the edge of the cornea); episcleritis (inflammation of the outer coating of the white of the eye); dry eyes; and inflammation of the optic nerve (very rare).

Kidney Disorders

Kidney disorders occur more often in people with Crohn's disease than in those with ulcerative colitis. This is because Crohn's disease commonly affects the small intestine and its potential effects on the absorption of nutrients. Kidney stones are the most common kidney disorder. Less common kidney disorders include hydronephrosis (blockage of the kidney tubules) and glomerulonephritis (inflammation of the kidney).

Some medications used to treat IBD e.g. cyclosporin and rarely compounds containing mesalazine (5-ASA) can also cause injury to the kidney, although these usually resolve once the medication is discontinued.

Liver Disease

The liver can become inflamed during periods of active disease, although it usually resolves if the IBD is treated effectively. A significant complication is called Primary Sclerosing Cholangitis (PSC). It occurs in 1-4% of patients and is more common in ulcerative colitis than Crohn's disease. 70% of people with PSC have IBD. This disease is caused by inflammation and scarring in the bile ducts. There is no effective drug treatment and liver transplantation is the treatment for the rare patient who develops advanced disease. People with PSC have an increased risk of developing cancer of the gall bladder and bile ducts. The risk is 20 times greater than

the occurrence in the general population, but cancer is still very rare.

Skin Disorders

Skin disorders are common. The most common skin disorders associated with IBD are erythema nodosum (tender red bumps that occur on the shins, ankles and arms), pyoderma gangrenosum (deep, bluish ulcers that occur on the shins, ankles and arms and aphthous stomatitis (ulcers in the mouth). In some instances, medications used to treat IBD can cause skin disorders. For example, sulphasalazine can cause an allergic-type skin rash and long-term use of corticosteroids can cause thinning of the skin, facial swelling or acne.

Malabsorption and Malnutrition

Malnutrition is a common problem for people with IBD. The small intestine is involved in the absorption of essential nutrients such as carbohydrates, proteins, fat and vitamins. Crohn's disease of the small intestine can cause malnutrition if small intestinal disease is extensive and prolonged. Manifestations include low body weight, sometimes with vitamin and mineral deficiencies.

Can extra-intestinal manifestations be treated?

Treatment depends on the type, location and the severity of the complication. For example, eye drops may be used to treat eye inflammation and specific medications may be needed to improve bone density. Many extra-intestinal manifestations respond to treatment directed at the IBD. For instance, arthritis of the distal joints usually subsides when the intestinal disease is effectively treated with anti-inflammatory medications, or rarely, by means of surgical removal of the inflamed bowel. If patients are deficient in vitamin B12, this can be replaced by injection. If there is a deficiency in iron, this can be given as tablets, a liquid, by injection or infusion. Nutritional supplements can be given in the form of concentrated nutrient solutions. Hospitalised patients can be given intravenous fluids, sometimes in the form of Total Parenteral Nutrition (TPN) where all nutrients are supplied by the intravenous route.

Are there complications in IBD that specially affect children and adolescents?

Yes. When IBD affects children or adolescents, growth may be slowed or there may be a delay in the onset of puberty. It is important to recognize the correct cause of delayed growth and development because effective treatment of the IBD will usually restore growth and maturation patterns. For unknown reasons the extra-intestinal or systemic manifestations may predominate in children and even overshadow the intestinal symptoms, thus making diagnosis more difficult. It is therefore of greater importance to keep close watch on youngsters who fail to grow or thrive, feel sick, have fever, and complain of general malaise and weakness, for these may be systemic manifestations of IBD.

Can IBD lead to bowel cancer?

Both ulcerative colitis and Crohn's disease have an increased risk of colon cancer. Two factors determine the risk of cancer: how much colon is inflamed and the total duration of the disease. If it is extensive and present for a long time (at least 10 years), then there is an increased risk of colon cancer.

Generally, surveillance colonoscopy is recommended for at-risk patients. This technique can be used to pick up microscopic precancerous changes in the bowel referred to as dysplasia. 50% of patients with severe dysplasia turn out to have colon cancer. Most specialists advocate one to three yearly colonoscopy.

There is an increased risk of small-bowel cancer in Crohn's disease, with patients diagnosed prior to age 20 at the greatest risk. However, it is extremely rare in the general population, and even with the increased risk is still a very rare event in Crohn's disease patients.

This information is for general informational purposes and does not constitute medical advice. Please seek information and advice regarding your condition and/or treatment from your doctor.



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