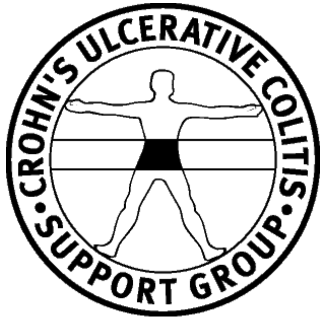

Complications

CCSG Information pamphlet No. 6

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This booklet sets out to answer the questions most commonly asked about the complications that are associated with inflammatory bowel disease (IBD). Complications can arise before the disease is diagnosed and serve as a sign that leads a physician to the disease.

Complications can be divided into 2 types: those related to the intestine itself, and those outside the intestine. This booklet addresses questions about the more common complications associated with IBD.

Complications in general can be defined as events that make a simple matter more complex. Uncomplicated inflammatory bowel disease involves inflammation of portions of the intestinal tract, of large or small intestine, or both. In uncomplicated disease one would expect improvement especially with appropriate treatment. Lack of improvement, advancement of the disease or its extension beyond the intestinal tract can be seen as complications.

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

Complications are by no means inevitable or even frequent, especially in appropriately treated patients. However, they are sufficiently common and cover such a wide range of manifestations, 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 grossly dilated and inflamed. The patient becomes acutely ill with fever, abdominal pain, diarrhoea, and possible vomiting. It can result in perforation, 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.

Other common complications include perforation, abscesses and fistulas (Crohn's disease only), bleeding (and anaemia), anal skin tags and fissures, 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 colitis patients respond satisfactorily to medical treatment and never develop any complications. In Crohn's disease the complication rate is higher eg. 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 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. Such passages may also lead to other internal organs or 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 this calls for a surgical incision and drainage. 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 inflammatory bowel disease?

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?

A small percentage of patients with inflammatory bowel disease suffer from inflammation of the distal joints (small joints of fingers, hands, feet, ankles, and knees) or of the central joints (spine and sacroiliac joints). A small percentage of patients suffer from a painful inflammation of the eye called iritis and a small percentage of patients may suffer from erythema nodosum which is a type of skin lesion that is red, swollen and painful. Another skin problem that may affect some patients is pyoderma gangrenosum (punched-out ulcerations). It is believed that these manifestations represent disturbances in the immunologic system (the body's defence systems against the inflammatory process or against abnormal products of intestinal metabolism).

Osteoporosis (low bone density) is also a frequent complication of IBD related to steroid use, low calcium intake and lack of exercise. Monitoring is particularly important in postmenopausal women.

Some people with IBD also get mouth sores, pancreatitis (a side effect of some IBD drugs), and have blood clotting problems (usually increased clotting).

Can the liver be affected in inflammatory bowel disease?

A small number of patients have disturbances in liver functions and structure. One of the most serious is called Primary Sclerosing Cholangitis (PSC). It occurs in 1-4% of patients and more in ulcerative colitis than Crohn's disease. 70% of people with PSC have IBD. This disease causes hardening in the biliary tree and inflammation of the bile duct. There is no effective drug treatment and liver transplantation is the treatment for the rare patient who develops advanced disease.

About 1% of people with IBD develop cancer of the gall bladder or bile ducts. This 20 times greater than the occurrence in the general population, but still very rare.

Can these extra-intestinal manifestations be treated?

Most of them respond to treatment directed at the inflammatory bowel disease. For instance, arthritis of the distal joints usually subsides when the intestinal disease is effectively treated with anti-inflammatory drugs, or rarely, by means of surgical removal of the inflamed bowel.

When the patient has arthritis or inflammation of the joints, how can the doctor tell that this problem is connected with the intestinal condition?

This is not always easy, particularly in patients who have severe inflammation of the joints and mild or even absent intestinal symptoms. In most instances, the presence of diarrhoea, or any of the other symptoms of inflammatory bowel disease, is the most important clue to the correct identification of the joint problem cause. Also, the joints in this case, are usually not as severely affected as they are in rheumatoid arthritis and do not undergo destructive changes.

Since the small intestine is involved in the absorption of foods, can Crohn's disease of the small intestine cause malnutrition?

This depends on the extent and severity of the disease. If a small segment of intestine is involved and treated promptly and appropriately, malnutrition should not develop. If the disease is extensive and prolonged, malnutrition can develop, characterised by low body weight, sometimes with vitamin and mineral deficiencies. This is a common problem for people with IBD. For more information see CCSG Information Leaflet No.3 - Nutrition and Diet.

What can be done to combat malnutrition?

A combined approach of medical treatment and, if necessary, surgical treatment of the inflammation, together with replacement of nutrients is usually indicated. If patients are deficient in vitamin B12, this can be given by injection. If there is a deficiency in iron, this can be given in tablet or liquid form or by injection. 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 inflammatory bowel disease 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.

Are the systemic manifestations of IBD the same in children as in adults?

They tend to be the same, but 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.

When a youngster develops IBD and suffers from diarrhoea, bleeding, fever, etc. doesn't it affect his or her emotional state?

Serious illness will affect any person, but youngsters may be less able to cope than adults. For more information see CCSG Information Leaflet No.5, Emotional Factors.

Can IBD lead to bowel cancer?

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 patients.

In ulcerative colitis two factors determine the risk of cancer: how much colon is inflamed and the total duration of the disease. If you have Crohn's colitis, 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. Some specialists advocate yearly and some every 2 years. This technique can be used to pick up microscopic changes in the bowel referred to as dysplasia. 50% of patients with severe dysplasia turn out to have colon cancer too.

The risk of developing cancer in ulcerative colitis patients is greater than that for people with Crohn's.

Summary

With proper treatment now available, in the form of anti-inflammatory drugs (sulfasalazine, mesalazine or corticosteroids) and in some situations, immunosuppressants, the majority of patients do well and do not develop any serious complications. Early recognition, proper treatment, good nutrition and a positive outlook are the most important deterrents to the complications of inflammatory bowel disease.