COLON CANCER

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Anathomy

The Big Bowel is the final part of the digestive apparatus; it starts from the ileocecal valve, following the small bowel, and ends with the anus. It is divided into two portions: the proximal one (about 90 cm long) called colon and the final one called rectum (about 15 cm).

The colon is then divided into different parts: from the right side to the left it is called cecum, right (or ascending), transverse, left (or descending) and sigmoid colon.

The most important function of the colon is the absorption of the water contained in food and it allows the accumulation of the faeces in order to defecate normally only once or twice a day.

The disease

Colon cancer (almost always an adenocarcinoma) is the second most recurrent tumor in the United States. It affects annually 140,000 individuals and it causes the death of about 60,000 people every year. In Italy, in the last 40 years, the annual incidence of this neoplasia has progressively increased, with 70 new cases out of 100,000 inhabitants per year.

This tumor is potentially curable if diagnosed in time

Generally, cancer develops from the colonic mucosa (the inner part of the colon), with the appearance of a polyp (small benign tumor), which is easily removable with colonoscopy if detected in time. In two or three years the polyp enlarges and becomes a malignant tumor (cancer). The polyps are more frequently found in the sigmoid and in the rectum (60% of cases).

Who are the individuals at a higher risk?

The risk increases with age; 90% of the cancers affects individuals over fifty, and the risk is doubled every ten years. Some diseases like ulcerative colitis, Crohn's disease, colic polyposis and the presence of cancers in other organs (particularly breast and matrix cancer) are often associated to the colonic neoplasia.

An important risk factor is certainly familiarity. Although familiarity for colon cancer represents a risk on its own in the development of this type of tumors, two hereditary forms must be taken into consideration: a)a familiar form (30/40% incidence) in which in first degree relatives the risk to develop a colorectal cancer is two times higher, especially if the relative was affected by cancer before the age of fifty); b)a form

associated to specific genetic abnormalities (4/6%), i.e. the Familiar Polyposis, the Lynch syndrome and other syndromes.

The colon neoplasia screening - who needs it and how it is performed

Research of occult blood in the faeces is the simplest and the least expensive method for the screening of the big bowel neoplasia. Unfortunately such a method proves to be effective only in the 50% of cases. Over fifty Individuals with no risk factors should undergo a conventional colonoscopy, (a test which allows the mucosal visualization of the entire colon) or a virtual colonoscopy (by mean of a particular CT scan technique). Such a test must be carried out at the age of forty if there is a colorectal neoplasia familiarity. In individuals born in families in which the presence of cases of colon cancer or other types of neoplasia is high, besides colonoscopy, a genetic study of the family is suggested.

Which are the symptoms of colon cancer?

The most frequent symptom of the colon neoplasia is the presence of blood in the faeces. Another symptom, generally precocious, is the alteration of the defecation habits, either in the presence of diarrhea or in the presence of constipation, depending on where the cancer is situated. Other symptoms can be loss of weight and asthenia. Unfortunately polyps and small colon cancer do not present any precocious symptoms, hence the necessity of a preventive colonoscopy at the age of fifty and the diffusion of adequate programs of screening.

Which is the treatment of colon cancer?

In most cases the therapy of colon cancer is surgical and it consists in the removal of the part of the bowel affected by the neoplasia and of the underlying lymphnodes. Differently from the treatment in the tumor of the rectum, in the colon cancer, the procedure always consists in the reestablishment of the bowel continuity, which allows the patient normal bowel habits. Rarely, such as in emergency operations or in the presence of post-operatory complications, it can be necessary to make a stoma to deviate the faeces outside the bowel; such a stoma is generally temporary and a few months later bowel continuity is generally restored. In the event that the histological specimen attests the presence of cancer in the removed lymphnodes, it will be necessary to undergo complementary chemotherapy. If advised by the specialist oncologist, such treatment could also be used in cases of high malignancy neoplasia. In Italy this type of surgery is performed by general surgeons. In Europe and in the United States, there is a specialized person called **colorectal surgeon**. The most recent literature issues show how the results are statistically better, in terms of survival and reduced number of complications, in Countries where this kind of surgery is performed by colorectal specialists.

Bibliography

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