

Prevention and Nursing of Gastric Cancer

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Abstract:

Gastric cancer is a high incidence cancer in our country, surgical treatment is the cornerstone of gastric cancer treatment, having low early diagnosis rate. It is characterized by high tumor load, strong heterogeneity and poor prognosis. The lesions of gastric cancer first occur in the gastric mucosal epithelium, and regional differences in gastric cancer. The incidence is slightly higher in the east coast and northwest of China than in other areas. Men aged 60 to 69 have stomach cancer of high risk groups. The prevention, early detection, diagnosis, treatment and nursing of gastric cancer are very important. The postoperative situation of gastric cancer and its disease degree, disease site, tissue type, lifestyle and treatment measures related.

Keywords:

Gastric Cancer, Pathogenesis, Prevention, Nursing

1. Introduction

Gastric cancer tends to occur in people over the age of 50. Due to changes in diet structure, increased life pressure and mental pressure, the incidence of gastric cancer tends to be younger and the incidence is gradually increasing. Gastric cancer can occur in the gastric fundus cardia, stomach body or gastric antrum, and the operation method is different in different parts. Most of the patients have no obvious symptoms in the early stage, some patients will have symptoms of upper abdominal discomfort, similar to the symptoms of upper digestive tract inflammation or ulcer, which are easy to be ignored, so the number of people in our country who detect stomach cancer in the early stage is less than 10%. On the basis of this treatment, explore the prevention and nursing of gastric cancer.

2. Basic Theory of Gastric Cancer

2.1. Pathogenic factors and classification of gastric cancer

The risk factors related to the incidence of gastric cancer mainly include genetic susceptibility factors and external environmental factors. Currently, it is believed that the incidence of gastric cancer is related to living environment, dietary habits, regional differences and *Helicobacter pylori* infection and other factors. Gastric cancer can be divided into early gastric cancer and advanced gastric cancer according to the stage of development. [5] Early gastric cancer mainly distributed in mucosa and submucosa,

regardless of the size of inflammation or lymph node metastasis. Advanced gastric cancer mainly includes middle stage gastric cancer and late stage gastric cancer. Cancer tissues invade the base of gastric wall for middle stage cancerous transformation, and cancer tissues reach the subserous membrane or infiltrate into nearby organs beyond the serous membrane or metastasize into advanced gastric cancer.

2.2. Pathogenesis of gastric cancer

Helicobacter pylori infection is a key link in the development of gastric cancer. [3] Most stomach cancers progress from chronic gastritis, chronic gastritis to stomach cancer. The evolution includes four steps: chronic non-atrophic gastritis, chronic atrophic gastritis, atypical intestinal epithelial dysplasia, mild dysplasia transformed into severe dysplasia under various inducements, and finally gastric cancer. Among them, benign gastric diseases with a risk of gastric cancer, such as chronic atrophic gastritis, are called precancerous diseases; Pathological changes that are more likely to transform into cancerous tissues, such as intestinal metaplasia and dysplasia, are called precancerous lesions. The occurrence of gastric cancer is also related to bad eating habits such as overeating, often eating stale, pickled, smoked and baked foods and high-salt foods.

2.3. Diagnostic criteria for gastric cancer

Gastroscopy and biopsy are the gold standard for the diagnosis of gastric cancer. Biopsy specimens were extracted by gastroscope, and Her-2 detection was usually performed. Evaluate MSI/MMR status, PDL1 expression, and EBV infection status in tumor tissue to determine whether patients are candidates for immunotherapy or targeted therapy. For patients with precancerous lesions, X-ray barium meal examination, gastroscopy and biopsy should be performed for early detection and early treatment.

2.4. Metastasis of gastric cancer

Gastric cancer is more common in the antrum. It mainly metastases through lymph nodes. The most common site of late stage metastasis is hepatic metastasis.

3. Prevention of Gastric Cancer

a. A healthy diet: eat more fresh fruits and vegetables, whole grains and low lipoprotein, eat less red meat and processed meat, reduce smoking and alcohol consumption.

b. Control of *Helicobacter pylori*: *Helicobacter pylori* infection is one of the main risk factors for gastric cancer, and can be controlled by antibiotic treatment.

c. Regular physical examination: regular gastroscopy and *Helicobacter pylori* detection, early detection and early treatment.

d. Avoid environmental pollution: avoid exposure to chemicals, radiation and other harmful substances.

3.1. Prevention of pathogenic factors

a. Stop smoking and limit alcohol.

b. Pay attention to prevent *Helicobacter pylori* infection. The high incidence in China is related to the unaccustomed use of chopsticks, and one person's infection will infect the whole family.

c. Avoid fresh, pickled, smoked and baked food and high salt food.

d. Eat more fresh fruits and vegetables.

e. Often eat raw garlic and green onion, can inhibit and kill *Helicobacter pylori*.

3.2. Healthy lifestyle

a. Stop eating processed meat: Eating bacon, bacon, etc., increases the risk of cancer.

b. Refuse fast food: If the hard fried food in fast food is not chewed carefully into the stomach, the hard thing will cause the gastric mucosa to be damaged in the case of stomach peristalsis. If the gastric mucosa is not repaired in time, it will cause inflammation and ulcers, aggravating the condition.

c. Smoking cessation and alcohol restriction: Tobacco contains a large amount of nicotine, which can directly stimulate the gastric mucosa and destroy its barrier, thereby speeding up gastritis and gastric ulcer. Chronic, delayed healing, severe and persistent gastric ulcers are one of the precancerous lesions.

3.3. *Helicobacter pylori* detection

Helicobacter pylori is a common stomach bacteria that is commonly detected by a breath test, which is one of the most reliable tests. Patients need to inhale a solution containing urea on an empty stomach, and if *Helicobacter pylori* is present in the body, the level of carbon dioxide in the exhaled gas increases. [3] There are serological testing, gastroscopy and other methods, the specific detection method should be determined according to the patient's situation and doctor's advice.

4. Treatment of Gastric Cancer

a. Surgical treatment: The most effective way to treat gastric cancer is surgical surgery, which is also the preferred method. These include distal subtotal gastrectomy, proximal subtotal gastrectomy, total gastrectomy with spleen, pancreatic body gastrectomy, Appleby operation, etc. [1]

b. Radiotherapy: Most gastric cancer patients cannot completely remove the tumor through surgery, so this method helps patients who are not suitable for resection. It is not helpful, mainly because it is not possible to determine the anatomic location, but it can be effective in alleviating its symptoms.

c. Chemotherapy: Adjuvant chemotherapy was performed after radical surgery. Most of the patients with gastric cancer are advanced gastric cancer, and it is not ideal to rely on surgical treatment alone. However, chemotherapy can limit the symptoms of patients, improve the quality of life of patients, and extend the survival time of patients. Therefore, chemotherapy is one of the important means to treat gastric cancer. The combination of several anticancer drugs can increase the anti-inflammatory effect, such as fluorouracil, fluorouracil furan, eufodine, etc. [2]

d. Immunotherapy: At present, the immunotherapy drug commonly used in the treatment of gastric cancer is opdivo, which is mainly suitable for advanced stomach above third-line treatment adenocarcinoma patients. At present, the Japanese Gastric

Cancer Society has pointed out in the fifth edition of the “Guidelines for the Treatment of Gastric Cancer” that opdivo is preferred for three treatments for unresectable and recurrent gastric cancer.

e. Gastroscopic treatment: Patients who are not suitable for surgical treatment can be reached with microwave, laser, and injection of anhydrous alcohol under the direct vision of the gastroscope the best curative effect.

f. Support treatment: give enough nutrition, enhance the patient's physique, is conducive to tolerance of surgery and chemotherapy. Use immune enhancers, such as interferon, interleukin, LAK cells, TIL cells, etc. to regulate the body's immunity. [2]

5. Care of Gastric Cancer

5.1. Preoperative Care

Patients often appear nervous, fear and other emotions, nursing staff should assist doctors to encourage patients to accept surgery and safely through the perioperative period, assistance patient adaptive training. Monitoring patients with blood pressure above 180/100mmHg requires preoperative hypotension. No smoking for at least 2 weeks before surgery, breathing training, diluted sputum and aerosol inhalation. Diabetics should control blood sugar for two weeks to correct water and electrolyte, acid-base balance disorders. Prophylactic use of antibiotics, correction of anemia and preoperative blood preparation. In addition to the above preparation, Karnofsky scores should be performed in elderly patients.

5.2. Postoperative Care

a. Condition observation: closely observe the patient's indicators, including temperature, heart rate, breathing, blood pressure, consciousness, urine volume and other indicators monitoring; Observe the location, nature and duration of abdominal pain. Observe whether the patients with hematemesis and black stool have gastrointestinal bleeding and perforation; In patients with ascites, cancer metastasis is suggested. [4]

b. Changes of body position: If the patient's consciousness is vague or not awake after surgery, the head should be tilted to one side in the decumbent position; The postoperative conscious state is clear awake patients, in a stable state of blood pressure should take a semi-seated position, this position is conducive to the patient's breathing and circulation, reduce the tension at the patient's surgical incision, relieve pain.

c. Fasting, gastrointestinal decompression: do not eat early after the operation, gastrointestinal decompression to reduce gastric gas and fluid accumulation, recovery surgery. There are certain benefits to oral healing.

d. Nutritional support: including enteral and external nutritional support. When injecting nutrient solution, the concentration, temperature and speed of the liquid should be strictly controlled. The patients were closely observed for complications such as nausea and abdominal pain.

e. Dietary care: Because most of the stomach is removed by surgery, the volume of the stomach is greatly reduced, which causes digestion and absorption disorders. Therefore, During hospitalization, food should not be eaten on the day of operation and 2 days after operation. After gastrointestinal motility recovery, the gastric tube

can be pulled out and a small amount of water can be added every two hours. Three days after the operation, appropriate intake of clear fluid diet, gradually return to normal diet. Patients who are unable to eat are given intravenous fluids as directed; For patients with pyloric obstruction, gastrointestinal decompression should be performed, intravenous fluid supplementation should be performed according to the doctor's instructions, serum protein, whole blood or plasma should be transfused if necessary, and foods prone to gas production should be fast or eat less, raw, cold, hard and irritating foods should be condoned, small and frequent meals should be taken, and abdominal discomfort should be observed after each meal.

f. Prevention of infection: In order to prevent the occurrence of infection, give the patient a warm water bath to keep the skin clean and dry to prevent infection. It is necessary to change the position regularly for patients in bed to avoid the occurrence of pressure ulcer; Good oral care; Avoid environmental irritations such as damp friction.

g. Early activities: In addition to elderly, frail and seriously ill patients, encourage and help patients do bed exercise to prevent thrombophlebitis.

5.3. Observation and nursing of complications

The primary postoperative complication observed was gastric hemorrhage. The gastric fluid extracted from the gastric tube during episodes of gastric hemorrhage exhibited a dark red or brown color, with bleeding volumes not exceeding 300ml within the initial 24-hour period. Subsequently, the bleeding gradually diminished and eventually ceased spontaneously. In cases where fresh blood drainage persists in the gastric tube for more than 24 hours, accompanied by hematemesis and melena, it indicates postoperative bleeding. If there is a continuous presence of a substantial amount of bright red blood in the short term, it is imperative to promptly inform the physician for appropriate management, including administration of hemostatic agents and transfusion as advised.

5.4. Health Education

Conduct health education to let patients understand the causes and inducements of gastric cancer; Guide patients to maintain a good mood, learn to relieve stress, and face the disease with a positive attitude. [4] Help patients develop healthy eating habits and eat more nutritious and vitamin-rich foods, especially those with high vitamin A and vitamin C content; Avoid or reduce consumption of high-salt foods and preserved foods; Do not eat raw, cold, hard, spicy and other irritating food; Small number of meals, cooking methods avoid frying. Reasonable arrangement of rest, moderate exercise, such as walking, running, in order not to feel tired is appropriate. Maintain good personal hygiene, keep indoor air circulation, take good protection when going out, and avoid going to crowded places.

6. Conclusions

Stomach cancer is a high occurrence kind in our country. Surgical treatment of stomach cancer is one of the most important and effective methods for treating it. In recent years, with the continuous development of medical technology and the gradual expansion of medical personnel, a new chapter in the treatment of gastric cancer has been opened. However, due to the high heterogeneity of the tumor, the overall therapeutic effect is still not ideal, and the precise treatment of gastric cancer is still a

long way to go. Precise treatment and overcoming the body's tolerance to drugs have become the key to optimizing clinical treatment outcomes. In the future, the treatment of gastric cancer needs more accurate diagnosis and nursing, and further improve medical skills to contribute to the prevention and care of gastric cancer.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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