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Study and Analysis of Other Tissues and Organs of Gastric Cancer and Gastric Malignant Tumor Metastasis - A Population-Based Study

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Abstract: *Research background*: At present, gastric cancer or gastric malignant tumors seriously endanger the health of human beings around the world. The main reason is that this do not have enough understanding of stomach cancer and gastric malignant tumors. Don't attach importance to health education. Helicobacter pylori treatment is incomplete, and it is clearly pointed out in the guidelines that some asymptomatic Helicobacter pylori infection do not need treatment. Our prevention measures for gastric cancer and gastric malignant tumors and the promotion of risk factors are insufficient, and the early screening of gastric cancer and gastric malignant tumors are not in place, so that some patients find advanced tumors when gastric cancer and gastric malignant tumors are found. when gastric cancer or gastric malignant tumors metastasize other organs, such patients belong to stage IV, and the prognosis is very poor. *Objective*: To improve the 5-year survival rate of patients with advanced gastric cancer or gastric malignant tumors and improve their quality of life. research on this kind of patient is meaningful. At present, the treatment process of such patients is also very controversial and different. Standardize the treatment process of such patients. *Research methods*: the number of studies and cases of gastric cancer or malignant tumors transferred to other organs from 2020 to 2023 in CNKI and PubMed public databases, and finally analyzed them. Organs include the brain, lungs, liver and large retina, spleen and pancreas, kidney and uterus, ovaries and vagina, and bone. Inclusion criteria: Gastric cancer or gastric malignant tumors are combined with omental metastasis, brain metastasis, lung metastasis, liver metastasis, spleen metastasis, pancreatic metastasis, kidney metastasis, uterine metastasis, ovarian metastasis and bone metastasis. *Results*: The most common metastasis of gastric cancer and gastric malignant tumors in this study are the liver and large omentum (76.8%), the brain (16.5%), lungs (2.2%), ovaries and vagina (1.8%), pancreas and spleen (1.3%), but kidneys and uterus (0.8%) and bone (0.6%) are relatively rare. Due to our systemic treatment, the survival rate of patients with straight gastric cancer or gastric malignant tumors has gradually increased, resulting in a gradual increase in tumor metastasis. It is agreed that patients with gastric cancer or gastric malignant tumors transferred to other organs should actively undergo radical tumor resection + tumor extinction + heat perfusion chemotherapy.

Keywords: Stage IV Gastric Cancer, Gastric Malignant Tumor, Metastasis, Organs, Standardized Treatment Process, Advanced Tumor

1. Introduction

The survival rate of patients has been greatly reduced. Early gastric cancer and gastric malignant tumors have a 5-year survival rate of more than 90%, and early lymph node metastasis is prone [1]. Stomach cancer and gastric

malignant tumors are the most common gastrointestinal cancers in the world [2]. Thanks to the latest systemic therapy, the life of patients with gastric cancer and gastric malignant tumors can be significantly prolonged, and the incidence of large omentum, brain, lung, liver, spleen, pancreas, kidney, uterus, ovaries and bone metastasis is increasing. These tumors can be metastasized by direct metastasis, blood metastasis, lymphatic metastasis, implant metastasis, etc., or this metastatic mode can be combined with each other. In order to improve the survival rate and quality of life of such patients, it is meaningful and valuable to study such patients.

1.1. The Incidence of Brain Metastasis of Gastric Cancer or Gastric Malignant Tumors Is Quite Rare

Patients can have synchronous or abnormal brain metastases. In recent years, due to the improvement of radiological technology and multi-mode treatment of systemic diseases, the incidence of brain metastasis has been increasing, which prolongs the survival rate, but also increases the risk of brain metastasis. Brainstem metastasis of gastric cancer and gastric malignant tumors is rare. Depending on the affected brain function area, patients may complain about headaches, motor disorders, mental changes, nausea or vomiting, seizures, aphasia or visual impairment [3]. From 2020 to 2023, 96817/586727 (16.5%) cases of brain metastasis of gastric cancer or gastric malignant tumors were retrieved in public databases such as CNKI and pubMed [3-6].

1.2. The Incidence of Lung Metastasis in Gastric Cancer or Gastric Malignant Tumors Is Quite Rare

Clinically, in addition to the clinical manifestations of gastrointestinal cancer, there are also respiratory symptoms. Clinically, such patients can find pulmonary nodules and space-occupying manifestations. Some patients may have clinical manifestations such as obstructive pneumonia, fever, pulmonary space occupation, hemoptysis, cough and phlegm. From 2020 to 2023, 12810/586727 (2.2%) cases of lung metastasis of gastric cancer or gastric malignant tumors were retrieved in public databases such as CNKI and pubMed [7-9].

1.3. Liver and Large Oment Metastasis of Gastric Cancer or Gastric Malignant Tumors Is Very Common, Ranking First

Clinically, nearly half of patients with gastric cancer or gastric malignant tumors can observe gastric cancer combined with liver and large omental metastasis. When gastric cancer or gastric malignant tumors have liver and large odinal metastasis, intestinal tumor symptoms and jaundice, fever, fatigue, poor tolerance, and even liver discomfort. Touch the liver and enlargement or mass. From 2020 to 2023, 450708/586727 (76.8%) cases of liver and large oment metastasis of gastric cancer or gastric malignant tumors were retrieved in public databases such as CNKI and pubMed [10-16].

1.4. There Are Also Pancreatic and Spleen Metastasis in Gastric Cancer or Gastric Malignant Tumors, and Most of Them Are Studied in the Form of Case Reports

When gastric or gastric malignant tumors occur in pancreatic and spleen metastasis, pancreatic metastatic tumors can have painless obstructive jaundice, poor, wasting, and accompanied by intestinal tumor symptoms. Splenic metastasis tumors can find spleen space occupation and gastrointestinal tumor symptoms at the same time. From 2020 to 2023, 7299/586727 (1.3%) cases of pancreatic rotation and spleen migration of gastric cancer or gastric malignant tumors were retrieved in public databases that meet the standards [17-18]. This shows that gastric cancer or gastric malignant tumors will occur clinically during pancreatic and spleen metastasis.

1.5. When Kidney and Uterine Metastasis Occurs in Gastric Cancer or Gastric Malignant Tumors

Patients can have symptoms of painless hematuria, pain in the kidney area, contacting the mass, and gastric tumor. When gastric cancer is combined with uterine metastasis, in addition to gastrointestinal tumor symptoms, there are also tumor symptoms that the uterus is invaded by malignant tumors. From 2020 to 2023, 4,767/586727 (0.8%) cases of kidney metastasis of gastric cancer or gastric malignant tumors were retrieved in public databases such as CNKI and pubMed [19-20]. This shows that kidney and uterine metastasis also occurs in the clinical practice of gastric cancer or gastric malignant tumors.

1.6. When Gastric Cancer or Gastric Malignant Tumors Cause Ovarian and Vaginal Metastasis

Clinically, the patient can show abnormal vaginal secretion, vaginal bleeding, and the abdomen can be enlarged. Such tumors are highly malignant and difficult to diagnose, and there is still a lack of unified standards for treatment. Regarding the above characteristics, it has attracted more and more attention from clinical workers. In recent years, most scholars have explored their clinical characteristics with a view to summarizing and discovering their new diagnostic and treatment strategies. When gastric cancer metastasizes the ovaries, the prognosis of the patient is poor, and most of them die within one year. From 2020 to 2023, 10874/586727 (1.8%) cases of ovarian and vaginal metastasis of gastric cancer or gastric malignant tumors were retrieved in public databases such as CNKI and pubMed [21-24].

1.7. When Bone Metastasis Occurs in Gastric Cancer or Gastric Malignant Tumors

In addition to gastrointestinal tumors, patients can also have pain and discomfort and swelling in the bone area. Imaging can be seen in imaging. From 2020 to 2023, 3452/586727 (0.6%) cases of bone metastasis of gastric cancer or gastric malignant tumors were retrieved in public databases such as CNKI and pubMed [25-28].

2. Objective

At present, the number of patients with stage IV gastric cancer or gastric malignant tumors has gradually increased clinically. There are also becoming more and more difficult to treat. Most of them die within a year and have a very poor quality of life. This do not have a standardized treatment process for such patients clinically. In clinical treatment, such patient treatment processes are different. Some scholars actively treat them, while others suggest that patients give up. Therefore, it is necessary to standardize the treatment process of such patients. In order to improve the 5-year survival rate of patients and improve the quality of life of patients, our research is necessary and meaningful.

3. Research Methods and Materials

Use statistics in CNKI and PubMed public database. Search the number of studies and cases of gastric cancer or gastric malignant tumors transferred to other organs from 2020 to 2023 for analysis. Inclusion criteria: From 2020 to 2023, gastric cancer or gastric malignant tumors were transferred to other organs, including the brain, lungs, liver and omentum, pancreas, kidneys and uterus, ovaries, vagina, bones, etc. Exclusion criteria: animal experimental research, comprehensive study, guidelines for disease treatment, expert consensus.

4. Results

The results of this study show that the most common metastasis of gastric cancer or gastric malignant tumors is still the liver (450708/586727). The number of tumors metastasized by other tissues and organs gradually increased. See Figures 1 and 2. Gastrocancer and gastric malignant tumors cause organ tissue metastasis such as gynecology and urinary system, relatively rare compared with other parts.

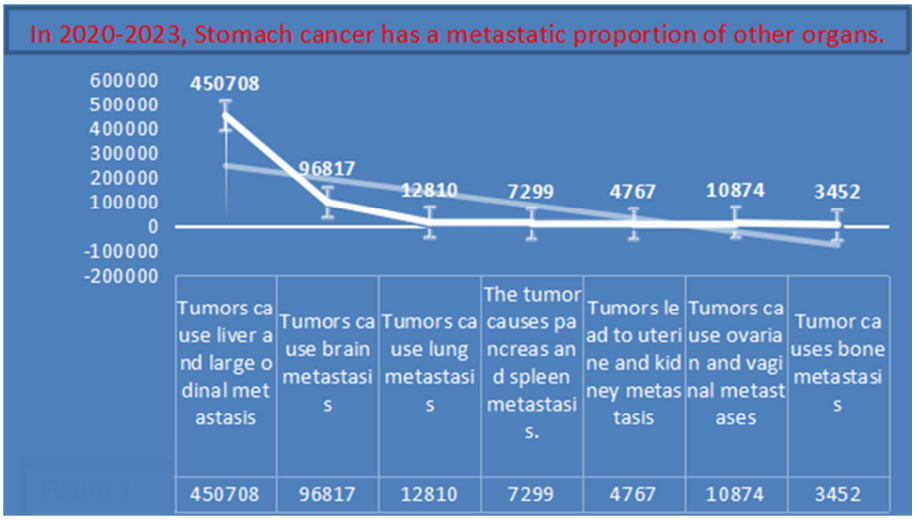

Figure 1. *In 2020-2023, Stomach cancer has a metastatic proportion of other organs.*

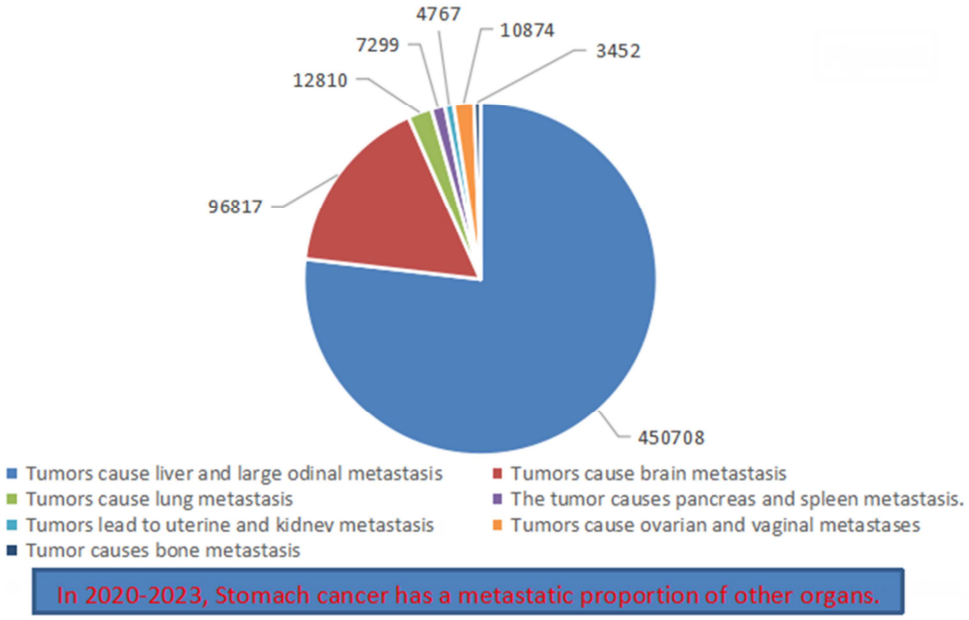

Figure 2. *In 2020-2023, Stomach cancer has a metastatic proportion of other organs.*

5. Discussion

5.1. From the Results of This Study

The Study can learn that gastric cancer or gastric malignant tumors are transferred to other organs; the liver is still the most common. Gastrointestinal tumors gradually increase the number of organ metastases such as the lungs, brain and ovaries. Such a result may be the reason why patients do not pay attention to their disease status, resulting in simultaneous tumor metastasis when diagnosing the tumor. It may also be that the survival rate of patients has been significantly improved after using systemic treatment technology for such patients, and the course of the disease has become longer, which eventually causes patients to have heterosexual metastasis during disease treatment. In the later stage, it will be individualized according to the patient's situation. Whether such a patient chooses a new adjuvant radiotherapy and chemotherapy before surgery depends on the pathological type and gene of the patient's tumor. If the new adjuvant radiotherapy treatment is effective before the operation, the preoperative tumor can be reduced in stages and the prognosis is good. If the new adjuvant radiochemotherapy is not effective before the operation, the condition will further aggravate during the treatment, and the tumor can have further metastasis and invasion, and the prognosis of such patients is even worse. Finally, patients with gastric cancer or gastric malignant tumors with other organ metastasis can be treated by surgery after evaluating the patient's physical condition. Some patients who are in poor physical condition and cannot be treated surgically choose individualized treatment.

5.2. For Patients with Gastric Cancer or Gastric Malignant Tumors

The treatment analysis when the tumor is transferred to other organs is as follows. Such patients, whether the gastrointestinal tumor is simultaneous or heterogeneous, when the patient's cardiopulmonary function is good, active surgical treatment is recommended. When the patient's cardiopulmonary function is poor, non-surgical treatment is recommended; it includes new adjuvant treatment/transformation therapy and palliative treatment.

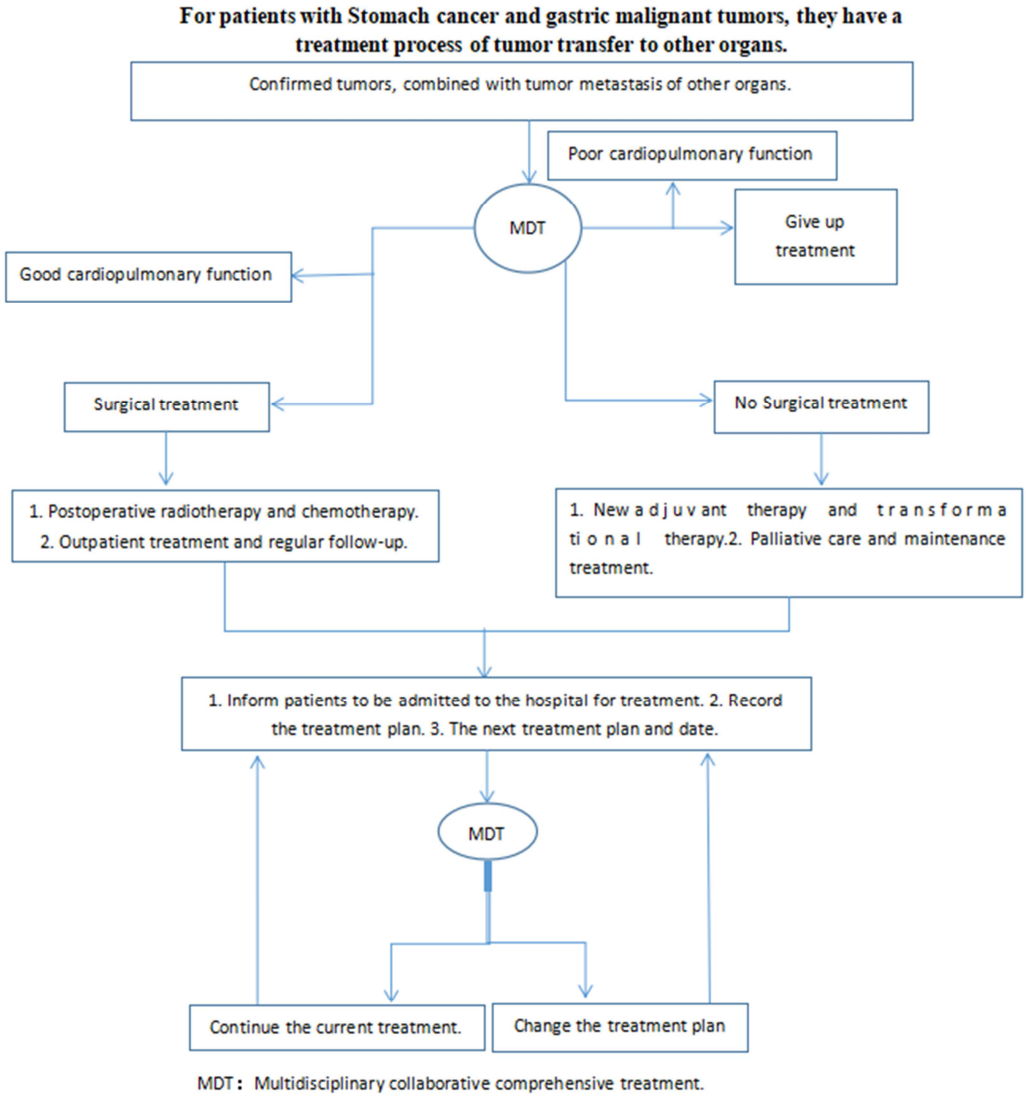

Figure 3. *For patients with Stomach cancer, they have a treatment process of tumor transfer to other organs.*

5.3. Patient's Treatment Process

For Patients with Gastric Cancer or Gastric Malignant Tumors Metastasis. They have a treatment process of tumor transfer to other organs. See flowchart, see Figure 3.

6. Conclusion

The most common metastasis of gastric cancer and gastric malignant tumors in this study are the liver and large omentum (76.8%), the brain (16.5%), lungs (2.2%), ovaries and vagina (1.8%), pancreas and spleen (1.3%), but kidneys and uterus (0.8%) and bone (0.6%) are relatively rare. Through the results of this study, that learned the treatment methods and processes of advanced tumors. Such results bring hope to patients with advanced tumors. Under such a formal treatment path and process, hope to benefit all patients and improve the survival rate in the later stage. At the same time, such patients also have research value and significance.

Solemn Declaration

All authors of this study have no conflict of interest. All the data in this study come from public databases, so I am grateful to public databases such as CNKI and PubMed. There are no ethical-related problems in this research data.

Wu ping dong: Write papers, collect, statistics and analyze data.

Linda Chiuman, Liena and liuchao Professor: Guide the writing of papers and reviewing materials.

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