The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
VOLUME 05 ISSUE 07 Pages: 58-63
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

Journal Website: https://theamericanjournals.com/index.php/tajmspr

Research Article

FEATURES OF DEVELOPMENT OF MECHANICAL JAUNDICE IN GASTRIC CANCER AND METHODS OF ITS ELIMINATION

Submission Date: July 20, 2023, **Accepted Date:** July 25, 2023,
Published Date: July 30, 2023 |
Crossref doi: https://doi.org/10.37547/TAJMSPR/Volume05Issue07-10

Juraev Mirzhalol Dekhkanovich
Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology, Samarkand State Medical University, Republic of Uzbekistan, Samarkand

Kuliev Aziz Abdumazhidovich
Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology, Samarkand State Medical University, Republic of Uzbekistan, Samarkand.

Tursunov Odil Mamasamievich
Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology, Samarkand State Medical University, Republic of Uzbekistan, Samarkand

ABSTRACT

Minimally invasive percutaneous transhepatic decompression interventions are an effective way to restore bile outflow in obstruction of the biliary system. These techniques make it possible to quickly and effectively eliminate breast cancer and cholangitis, make it possible to carry out surgical interventions in the most favorable conditions, in a planned manner, and in patients, they can serve as an alternative to surgical treatment. These interventions are less traumatic, are accompanied by a small number of complications and can significantly improve the results of treatment of patients with breast cancer.

KEYWORDS

Stomach cancer, palliative gastrectomy, obstructive jaundice, hepatic cholangiostomy.

INTRODUCTION

Around 990,000 new cases of stomach cancer are registered annually in the world, of which about 738,000 die (3). Gastric cancer is the fourth most commonly diagnosed cancer and the second leading cause of cancer death worldwide (4). In the structure of oncological morbidity (RF), gastric cancer ranks 6th, 2nd in terms of mortality (1). In 2020, 36171 new cases of stomach cancer were detected.

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
VOLUME 05 ISSUE 07 Pages: 58-63
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

One of the terrible complications of stomach cancer is obstructive jaundice (JJ). Breast cancer in gastric cancer develops due to metastatic lesions of the lymph nodes of the hepato-duodenal ligament of group 12p, liver metastases, invasion of the primary tumor and local recurrences of gastric cancer. (6,7,8). Jaundice occurs in rare cases with gastric cancer and its incidence has been reported to be 1.3-2.4% (9).The main cause of obstructive jaundice in gastric cancer is a metastatic lesion of the lymph nodes of the hepatoduodenal ligament, which is 75-92% (4).

According to research in Lee at all. 54 patients with metastatic gastric carcinoma suffering from obstructive jaundice were retrospectively analyzed. In which of the 50 (92%) patients the causes of obstructive jaundice were metastatic lesions of the lymph nodes of the hepatoduodenal ligament, 4 (8%) patients had direct invasion of the primary or recurrent tumor. The rate of obstruction of the intrahepatic duct to the hilum of the biliary tract (segment 1) was 15%, the common hepatic duct (segment 2) in 46%, the proximal half of the common bile duct (CBD) (segment 3) in 32%, and the distal half of the CBD (segment 4)) in 7% (10).

According to Takeshi Ogura et al., the cause of obstructive jaundice in gastric cancer, metastatic lymph nodes in the hepatoduodenal ligament was observed in 31 (76%) patients, in 11 (24%) patients, direct invasion of primary gastric cancer into the bile ducts.

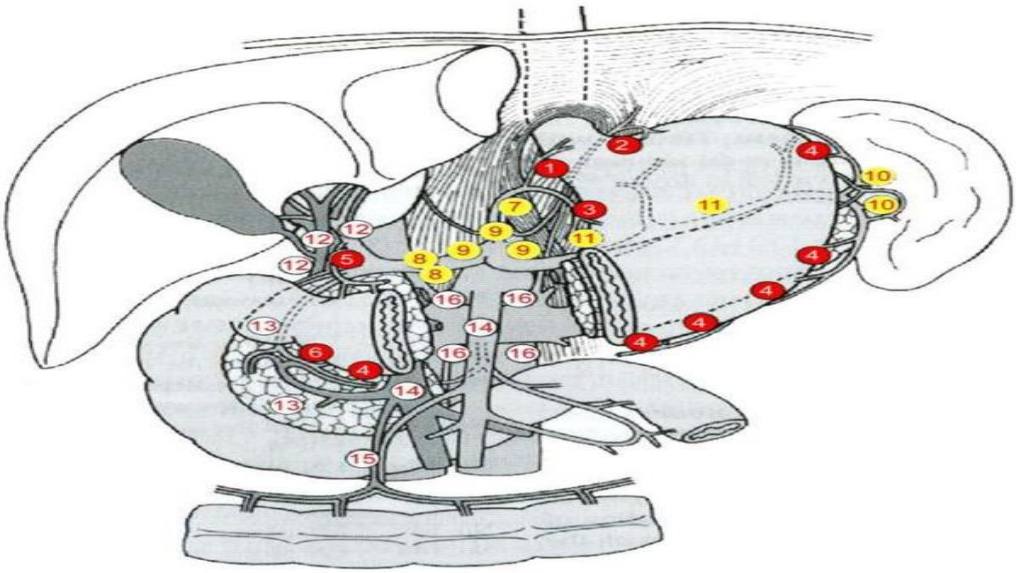

Рис. 1. Схема регионарных лимфатических узлов желудка (Japanese Gastric Cancer Association, 1998).

In diagnosis, the data of clinical and objective research, analysis of complaints, anamnesis of the disease, clinical and laboratory research and instrumental diagnostic methods are of decisive importance. Establishing the level of the block of the biliary tract is the main non-invasive diagnostic method is ultrasound (ultrasound). According to some reports, the sensitivity of ultrasound in determining the level of obstruction of the biliary tract is 90% - 91.2%. The main ultrasound sign of obstruction of the biliary tract is the expansion of the extra and intrahepatic bile ducts (9).

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
VOLUME 05 ISSUE 07 Pages: 58-63
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

Magnetic resonance imaging (MRI) is a highly informative diagnostic method, since it is possible to visualize the tumor, ductal system, and vascular structures. Foreign and domestic experts report on the effective use of three-dimensional magnetic resonance cholangiopancreatography. This type of MRI allows obtaining a native image of the bile ducts, comparable in diagnostic value to radiopaque bile ducts (7).

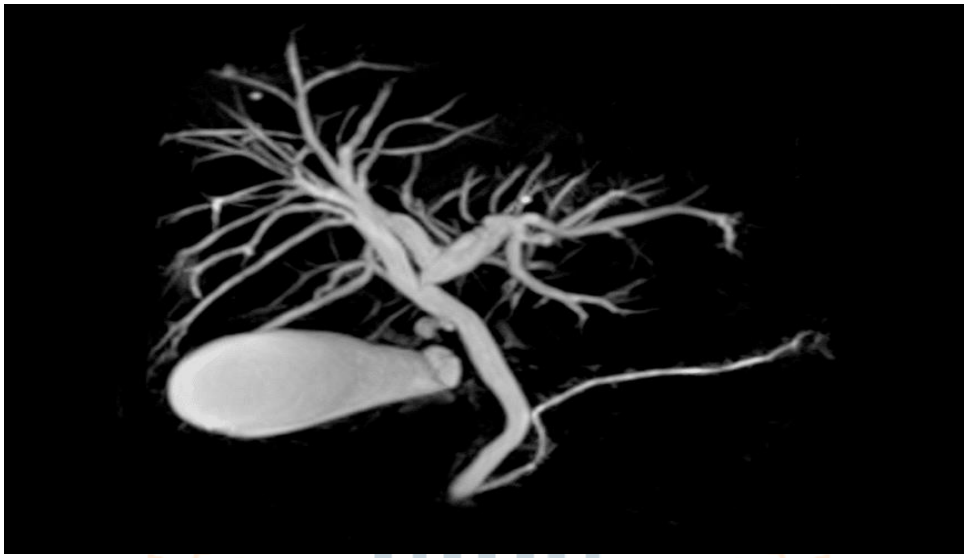

Figure 2: MR cholangiography with contrast.

Obstructive jaundice itself causes terrible complications: hemodynamic, metabolic, coagulation and immune changes in the body, leading to functional and morphological disorders of the liver and other vital organs, as a result of which multiple organ failure may develop (10). At the same time, obstructive jaundice complicates further treatment of advanced cases of gastric cancer. The most important treatment for advanced cases of gastric cancer is chemotherapy, as jaundice is one of the contraindications to chemotherapy. Chemotherapy and surgical decompression are usually recommended for palliative purposes (12). Surgical treatment of obstructive jaundice is considered the treatment of choice for patients with biliary obstruction (13).

Minimally invasive methods of biliary drainage is a necessary procedure to relieve jaundice, prevent complications, start chemotherapy and improve prognosis. (9) Among the minimally invasive methods of decompression of the biliary system can be divided into two groups, endoscopic and percutaneous. Endoscopic drainage includes endoscopic retrograde cholangiopancreatography (ERCP) with endoscopic papillosphincterotomy (EPST), percutaneous transhepatic cholangiography (PTCG) with percutaneous transhepatic cholangiostomy (PTCS) (14). Gastric cancer in rare cases is complicated by obstruction of the biliary tract and this often leads to the development of obstructive jaundice. (5) According to the opinion, the causes of obstructive jaundice in gastric cancer may be a metastatic lesion of the l / n hepatoduodenal ligament.

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
VOLUME 05 ISSUE 07 Pages: 58-63
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

PTCHG and PTCHS in a patient with APZhP

Obstruction of the common bile duct in advanced gastric cancer is predominantly due to metastatic lymphadenopathy in the hepatoduodenal ligament at the level of the cystic duct.

Standard gastric surgery with lymphatic dissection for gastric carcinoma does not remove the lymph nodes along the hepatoduodenal ligament. Despite this, malignant obstruction after gastric resection is rare (12). According to a study by Japanese scientists, the frequency of metastases to the lymph nodes along the hepatoduodenal ligament, when the tumor is located in the distal third of the stomach, especially the malignant tumor is located in the antrum or in the pylorus, it is necessary to think about the defeat of the lymph nodes of the hepatoduodenal ligament, and lymphatic dissection is necessary. Lymph dissection is known to reduce the risk of developing obstructive jaundice due to lymphatic metastases of gastric cancer (13). Obstructive jaundice itself causes formidable complications: hemodynamic, metabolic, coagulation and immune changes in the body, leading to functional and morphological disorders of the liver and other vital organs and often leading to multiple organ failure (10).

According to some authors, the prognosis among patients with severe jaundice seems to be worse; mortality among patients with malignant neoplasms, mainly due to liver metastases, was high (11). Chemotherapy, surgical decompression, interventional decompression, and radiotherapy are usually recommended for palliative purposes (12). Among the minimally invasive methods of decompression of the biliary system, endoscopic and percutaneous methods can be divided into two groups. Endoscopic drainage includes endoscopic retrograde cholangiopancreatography (ERCP) with endoscopic papillosphincterotomy (EPST), percutaneous transhepatic cholangiography (PTCG) with percutaneous transhepatic cholangiostomy (PTCS) (14).

Endoscopic retrograde cholangiography (ERCP) in some patients is usually difficult due to deformity of the bowel loop after surgical interventions such as gastrectomy, gastric resection and Billroth II reconstruction or Rouxen-Y esophagojejunostomy.

The American Journal of Medical Sciences and Pharmaceutical Research
(ISSN – 2689-1026)
VOLUME 05 ISSUE 07 Pages: 58-63
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

In some cases of Billroth II anastomosis and Roux-en-Y gastrojejunostomy, it is difficult to advance the endoscope into the duodenal stump due to intestinal stenosis or excessive length of the intestine, possibly leading to perforation of the afferent loop (15, 16).

Percutaneous transhepatic placement of a biliary stent for obstructive jaundice caused by metastatic gastric cancer after gastrectomy, local recurrence of gastric cancer is a technically feasible, safe and clinically effective palliative procedure (7,9).

CONCLUSIONS

The introduction of minimally invasive technologies for decompression of the bile ducts in obstructive jaundice of tumor origin has reduced the number of open palliative surgical interventions in this category of patients, reduced the incidence of postoperative complications by 8.5%, and the incidence of bile peritonitis by 9% in the period from 2017 to 2022.

Obstructive jaundice should be eliminated as soon as possible from the moment of occurrence due to the real threat of developing cholangitis and liver failure.

REFERENCES

1. Chissov V.I., Starinsky V.V., Petrova G.V. et al. Main indicators of oncological care for the population of Russia in 2000 // Russian journal of oncology. 2002. No. 1. S. 35–39.
2. A.D. Kaprina, V.V. Starinsky, G.V. Petrova
3. Malignant neoplasms in Russia in 2017
4. (morbidity and mortality) [?] M.: MNIOI im. P.A. Herzen - branch of the Federal State Budgetary Institution "NMITs Radiology" of the Ministry of Health of Russia, - 2018.
5. Furley J., Bray F., Foreman D., Mathers K., Parkin N.M., Shin H.-R. Estimates of the global burden of cancer in 2008: GLOBOCAN 2008. Int. J. Cancer. 2010; 127:2893–2917. [PubMed] [CrossRef] [Google Scholar]
6. Jemal A., Center M.M., DeSantis K., Ward E.M. Global patterns of cancer incidence, as well as mortality rates and trends. Cancer epidemiol. Biomark. Previous 2010; 19: 1893–1907. [PubMed] [CrossRef] [Google Scholar]
7. Ogura T, Okuda A, Miyano A, Imanishi M, Nishioka N, Yamada M, Yamda T, Kamiyama R, Masuda D, Higuchi K. Comparison of controlled EUS and percutaneous biliary access in patients with obstructive jaundice caused by stomach cancer. Dig Liver Dis. 2019 February; 51(2): 247-252. Epub 2018 September 22nd.
8. Lee B. H., Chin S. Y., Kim S. A., Kim K., Do Y. S. Obstructive jaundice in gastric cancer: cause, site, and relationship with the primary lesion. Visualization of the abdominal cavity. 1995; 20: 307-311 [PubMed] [Crossref] [Google Scientist].
9. Makino T, Fujitani K, Tsuzinaka T, Hirao M, Kashiwazaki M, Nakamori S, Ikenaga M, Mishima H, Masuda N, Sawamura T. The role of percutaneous transhepatic biliary drainage in patients with obstructive jaundice caused by local recurrence of gastric cancer. Hepatogastroenterology. 2008 January-February; 55 (81): 54-7. [pubmed]
10. Miyazaki Y, Imamura H, Furukawa H, Kishimoto T, Ohta K., Nakata Y, Ohshiro R., Kamigaki S., Takemoto H, Fujimi S., Nakayama T, Fukunaga M, Osata H, Tatsuta M.
11. A case of advanced gastric cancer with obstructive jaundice due to liver metastases successfully treated with chemotherapy. Gan To Kagaku Ryoho. 2007 Nov; 34(12): 2132-4.
12. Hong HP, Seo T.S., Cha YH, Yu-J. R., Mok Y-J., O-J. H., Kwon S.H., Kim S.S., Kim S.K. Percutaneous placement of self-expanding metal stents in patients with obstructive jaundice secondary to metastatic gastric cancer after gastric resection.

The American Journal of Medical Sciences and Pharmaceutical Research (ISSN – 2689-1026)
VOLUME 05 ISSUE 07 Pages: 58-63
SJIF IMPACT FACTOR (2020: 5. 286) (2021: 5. 64) (2022: 6. 319) (2023: 7. 396)
OCLC – 1121105510
Publisher: The USA Journals

Korean J Radiol. 2013 September-October; 14(5): 789-96. Epub 2013 August 30th.

13. Galperin, E. I. Obstructive jaundice: the state of "imaginary stability", the consequences of the "second blow", principles of treatment / E. I. Galperin // Annals of Surgical Hepatology. - 2011. - T. 16, No. 3. - S. 16–25.
14. Björnsson E., Gustafsson J., Borkman J., Keelander A.J. The fate of patients with obstructive jaundice. Hosp Med. March 2008; 3(2):117-23. [PubMed].
15. Patel S, Heterpal N, Patvardhan R, Levy J. Obstructive jaundice secondary to metastatic cancer: a review. Prak Gastroenterol. 2004; 28:24–39. [Google Scholar].
16. Norio Shiraishi, Kazuhiro Yasuda, Kenji Kakisako, Tokuji Inoue, Yosuke Adachi, and Seigo Kitano Gastric cancer with obstructive jaundice. Gastric cancer volume 2, pages 76–78 (1999) [PubMed]
17. I.A. Lomakin, Yu.V. Ivanov, D.V. Sazonov, D.P. Lebedev DIAGNOSTICS AND THERAPEUTIC MANAGEMENT IN PATIENTS WITH MECHANICAL JAUNDICE Clinical practice №3, 2012 http://clinpractice.ru.
18. Hintze RE, Adler A, Veltzke W, Abou-Rebyeh H. Endoscopic access to the papilla of Vater for endoscopic retrograde cholangiopancreatography in patients with Billroth II or Roux-en-Y gastrojejunostomy. Endoscopy. 1997; 29:69–73. [PubMed] [Google Scholar]
19. Swarnkar K, Stamatakis JD, Young VT. Diagnostic and therapeutic endoscopic retrograde cholangiopancreatography after Billroth II gastrectomy is a safe procedure in the district general hospital. Ann R Coll Surg Engl. 2005; 87:274–276. [PubMed] [Google Scholar]