



Synchronous gastric and colonic cancer – A case report

Istovremeni karcinom želuca i debelog creva

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Abstract

Introduction. Synchronous gastric and colorectal cancer is present in 4% of cases, commonly as additional finding. This is the case of invasive, synchronous gastric and sigmoid colon cancer. **Case report.** A 63-years-old male patient admitted to our institution complaining on pains in epigastrium, vomiting, rapid weight loss and occasional constipation. Using the method of esophagogastroduodenoscopy (EGD) the presence of ulcero-infiltrative tumor of gastric fundus was verified, and colonoscopy revealed stenosing tumor of sigmoid colon. Undergoing a multislice computed tomography (MSCT) of the thorax and the abdomen the changes on the patient's right lung appeared, while video-assisted thoracoscopy (VATS) and biopsy of the right lung excluded malignant dissemination. A total gastrectomy with omentectomy, splenectomy, D2 lymphadenectomy and typical left hemicolectomy were also performed. Histopathological examination verified invasive, diffuse gastric adenocarcinoma and invasive, tubular colon adenocarcinoma. The patient underwent systemic postoperative chemotherapy. Two years after the surgical procedure, the patient is alive, with no signs of recidivism. **Conclusion.** In patients with symptomatology which does not correspond to primary malignancy, just like in the presented case, additional diagnostics is required. Combined resection is adequate surgical procedure for synchronous gastric and colonic cancer.

Key words:

neoplasms, multiple primary; stomach neoplasms; colonic neoplasms; diagnostic techniques and procedures; histology; digestive system surgical procedures.

Apstrakt

Uvod. Istovremeni karcinom želuca i debelog creva javlja se kod 4% bolesnika, obično kao uzgredan nalaz. Prikazali smo primer invazivnog, sinhronog karcinoma želuca i sigmoidnog kolona. **Prikaz bolesnika.** Bolesnik, star 63 godine, primljen je u našu ustanovu zbog bola u epigastrijumu, povraćanja, naglog gubitka telesne mase i povremene opstipacije. Ezofagogastroduodenoskopijom (EGDS) verifikovan je ulceroinfiltrativni tumor fundusa želuca, a kolonoskopski stenozirajući tumor sigmoidnog kolona. Multislajsnom kompjuterizovanom tomografijom (MSCT) grudnog koša i abdomena utvrđeno je postojanje promene u desnom plućnom krilu. Videoskopskom torakoskopijom (VATS) i biopsijom promene desnog pluća isključena je diseminacija. Učinjena je totalna gastrektomija sa omentektomijom, splenektomijom, D2 limfadenektomijom i tipična leva hemikolektomija. Patohistološkim pregledom verifikovan je invazivni, difuzni adenokarcinom želuca i invazivni, tubularni adenokarcinom kolona. Primenjena je sistemska postoperativna hemoterapija. Bolesnik je živ, bez znakova recidiva, 2 godine posle operacije. **Zaključak.** Postojanje simptomatologije koja ne odgovara primarnom malignitetu zahteva dodatnu dijagnostiku. Kombinovana resekcija je adekvatna hirurška procedura.

Ključne reči:

neoplazme, multiple, primarne; želudac, neoplazme; kolon, neoplazme; dijagnostičke tehnike i procedure; histologija; hirurgija digestivnog sistema, procedure.

Introduction

The presence of two or more simultaneous primary malignancies of different digestive organs is relatively rare in everyday surgical practice. So far, there have been descriptions of synchronous tumors of the larynx and the stomach^{1,2}, the stomach

and the duodenum³, the stomach and the colon⁴, the stomach, the gall bladder and colon^{5,6}. The most common form of synchronous digestive tract tumor is colorectal (CRC) and gastric cancer (GC). Among the most of described cases, synchronous gastric and colorectal cancers were the early carcinomas and discovered in preoperative endoscopic examination. We pre-

sented the case of invasive GC and CRC, treated by radical surgical method and followed during a 2-year period.

Case report

A 63-years-old male patient, admitted at the Clinic for Gastroenterology suspecting on the gastric tumor after emergency esophagogastroduodenoscopy (EGD). The patient noted the problems as sharp pain in epigastrium followed by vomiting, immediately after taking food, rapid weight loss (10 kg for one month), as well as occasional constipations without blood in stool. A longtime smoker with the history of alcohol abuse, the patient had no significant chronic diseases. Early, he had the operation of benign uvula polyps. Family anamnesis pointed on the hereditary inclination to malignant diseases, i.e. the mother died from leukemia, the father from small intestine carcinoma and the aunt from CRC. There was no conducted diagnostic examination for familial adenomatous polyposis of close relatives.

On physical examination no abnormality was discovered. At admission, the patient was in good general condition. Laboratory findings were in the normal average, including C-reactive protein (CRP), carcinoembryonic antigen (CEA), alpha-fetoprotein (AFP), prostate-specific antigen (PSA) and CA 72-4. On EGD an infiltrative change on the gastric fundus, without clear borders, dimension of about 5 cm and of ulcero-infiltrative type, spreading toward the small curve was found. Biopsy indicated gastric adenocarcinoma, histological gradus II, tubular type, intestinal type according to Laurén⁷.

Due to suffering from the mentioned pains and positive family anamnesis, colonoscopy examination was made and infiltrative change found, 3 cm long, approximately 30 cm from the anocutaneous line, of a slightly narrowing lumen. Biopsy indicated tubular, invasive adenocarcinoma of a low grade and intestinal type. Multislice computed tomography (MSCT) of the stomach and lesser pelvis confirmed the endoscopic findings, without the signs of lymphadenopathy and long distance metastasis. Thoracic sections demonstrated the existence of several micronodular solid changes in the lung parenchyma of the right lower lobe, suspected on secondary deposits, without lymphadenopathy in thorax. Video assisted thoracoscopy (VATS) biopsy of changes on the right lung was made. Following patohistologic examination of biopsies, malignant etiology was excluded.

Posterior to the preoperative preparation, the patient underwent the open surgical procedure through medial laparotomy. Intraoperatively, ulcero-infiltrative tumor was detected of the gastric fundus posterior wall (Bormann III), of about 5 cm, penetrating all the wall layers, without infiltrating surrounding structures. In the distal third of the sigmoid colon, the presence of vegetant tumor was found, of robust consistency and gray color, partially and circularly limiting the colon lumen, of about 35 mm, penetrating all the layers of the wall without infiltrating around structures. In the first surgical act, total gastrectomy with

omentectomy, splenectomy and D2 lymphadenectomy were performed. The resection border of the distal esophagus was sent to *ex tempore* histopathological analysis (frozen section histopathological examination) with the response – benign. In the second surgical act, typical left hemicolectomy was carried out. The digestive tract continuity was established by creating esophagojejunal end-to-side anastomosis, using isolated Roux loop and circular stapler, CEEA N°25. Postoperative care during the first 7 days included total parenteral and partially parenteral nutrition (TPN, PPN), from the second day the patient started with enteral nutrition and finally after the day 7, was on the oral food intake.

Histopathological analysis of GC (Figure 1) demonstrated the following: infiltrative (Ming), diffusive (Laurén) adenocarcinoma, stage pT3 N2 (9/25) Mx, histopathological grade G3, with the presence of lymphatic and perineural invasion. For CRC (Figure 2) we got the following answer: vegetant, tubular adenocarcinoma, stage B sec. Dukes (B2 sec. Astler Coller) pT3 N0 (0/11) Mx, histological grade G2, no vascular, perineural invasion. For technical reasons immunohistochemical analysis was not carried out. The patient underwent systemic postoperative chemotherapy. A 2-year postoperative follow-up did not shown any recidivism, but satisfying general condition and life quality.

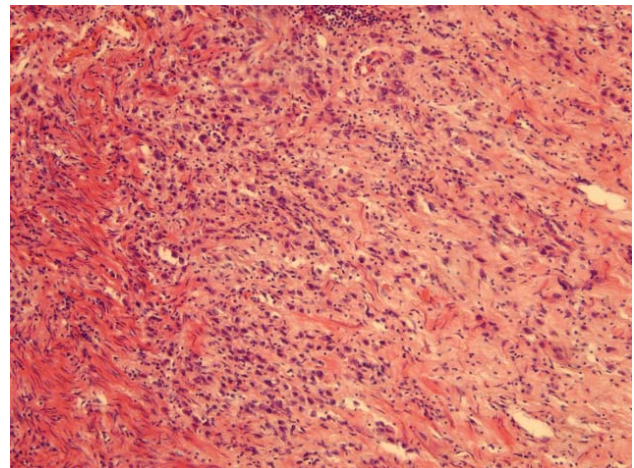


Fig. 1 – Poorly differentiated gastric adenocarcinoma – diffuse type (HE, 4x).

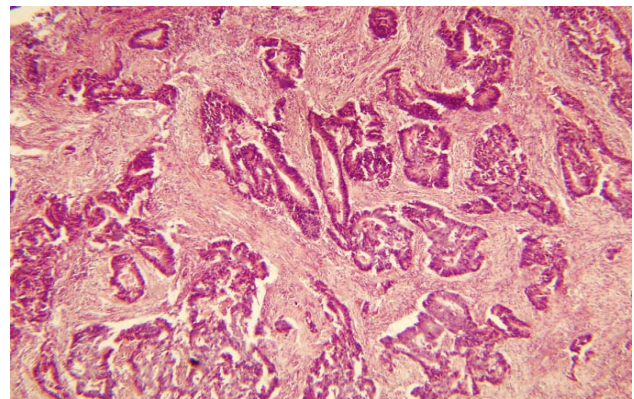


Fig. 2 – Moderately differentiated, tubular colon adenocarcinoma (HE, 4x).

Discussion

In the last decade, probably with the development of advanced diagnostic and therapeutic methods, there was a positive trend in synchronous primary carcinoma⁸. Warren and Gates⁹ were the first to define synchronous carcinoma: lesion malignancy should be histopathologically proved, lesions clearly differentiated and locally isolated, while the possibility that one of the tumors is metastatic must be excluded. Conclusions made by Lee et al.¹⁰ in retrospective analysis demonstrate that 3.4% of patients had synchronous carcinoma of the other digestive organ, with the most common CRC of 37.2% of all patients with synchronous carcinoma. After routine colonoscopy performed in patients suffering from GC Saito et al.¹¹ found CRC in 4% of cases. In our country, colorectal carcinoma incidence rate is 33.5/100,000 persons and 12/100,000 persons for GC¹².

According to the literature, the incidence rate for synchronous CRC and GC in our country may cover about 1/100,000 of newly discovered CRC.

Surgical resection with D2 lymphadenectomy represents the standard oncology treatment procedure for gastric and colorectal carcinoma; therefore, simultaneous resection is indicated for all cases where curative resection is to be expected^{13,14}. Although radical oncologic surgery involves the risks from early and late postoperative complications, in case of synchronous resection there is a sure increase of morbidity and mortality rate. Considering there are no randomizing studies proving that, synchronous resections are reserved exclusively in patients with good general condition, low ASA score, as in the presented patient. A study performed by Eom et al.¹⁵ including 4,593 patients with operated GC shows a 5-year survival rate in 55,2% of cases having combined resection due to synchronous GC and CRC, and 43,8% from that number due to GC dissemination without postoperative mortality. It has been considered that survival depends directly on GC stadium while not on other synchronous carcinoma^{15,16}.

In the presented patient clinical profile coincided with the epidemiological characteristics described in the literature – male, between 51 and 81 years old, heavy smoker with alcohol abuse^{11,17}. From the histopathological aspect, in the majority of cases one of the tumors is early and well differentiated carcinoma^{10,11}. In the presented case both carcinomas are invasive with the histological gastric grade G3 and colon grade G2. The dominant symptomatology in the patient addressed on gastric etiology, with the presence of colon disease incipient symptomatology. In most of cases, there was the dominance of obstructive colon symptoms, while the gastric disease symptoms were moderate or overlapping¹⁸, leading to a mistake in preoperative diagnostics, and the synchronous gastric carcinomas were incidentally noticed intraoperatively¹⁹. The majority of synchronous GC are early carcinomas, localized in the antrum while CRC in the left colon and the rectum²⁰⁻²². In the presented case, it was invasive, infiltrative carcinoma of the gastric fundus, thus explaining the fast development of gastric symptoms and a difference in symptomatology.

Preoperative EGD and colonoscopy represent standard procedures in some institutions¹⁰. The advancement and availability of radiological diagnostic methods evaluated during years, as well as the possibility of locating lesions, especially in early phase.

Conclusion

The presented patient suggests that in case of any doubt on symptomatology not corresponding with the diagnosis of digestive tract primary tumor, a possibility of synchronous multiple carcinomas should be considered. The detection of synchronous gastric cancer and colorectal cancer, obtained by easily available diagnostic methods, enabled us to treat both cancers simultaneously and thus beneficially influence the prognosis and the quality of life of the patient. Therefore, simultaneous resection represents the adequate approach to surgical treatment, although a longer follow-up is required to demonstrate oncological adequacy.

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