ADENOCARCINOMA OF THE GASTROESOPHAGEAL JUNCTION WITH SYNCHRONOUS RENAL CELL CARCINOMA: A CASE REPORT AND LITERATURE REVIEW

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Abstract. *Gastroesophageal junction adenocarcinoma is a rare type of cancer of the esophagus. It is usually diagnosed in advanced stages and much less frequently in the earlier stage, where surgical treatment is essential. Surgical treatment is also essential in kidney cancer. The occurrence of synchronous malignancies with an esophageal malignancy is a well-described phenomenon with an incidence ranging from 3.6 to 27.1%. To the best of our knowledge, only 11 cases of synchronous esophageal and renal cell carcinoma (RCC) have been previously described. We present a patient operated simultaneously for cancer of the gastroesophageal junction with synchronous renal cell carcinoma. The finding in the kidney was accidentally discovered by the routine CT scan on the occasion of the relatively early carcinoma of the gastroesophageal junction detected by upper endoscopy. The patient was admitted to the Thoracic Surgery Department, where Ivor-Lewis gastroesophagoplasty and right nephrectomy simultaneously were performed. The patient was followed for 5 years without evidence of disease progression.*

Key words: *Gastroesophageal junction carcinoma, kidney carcinoma, esophageal resection, gastroesophagoplasty, nephrectomy*

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INTRODUCTION

Gastroesophageal junction adenocarcinoma is a rare type of cancer of the esophagus. It is usually diagnosed in advanced stages and much less frequently in the earlier stage, where surgical treatment is essential. Surgical treatment is also essential in kidney cancer. The occurrence of synchronous malignancies with an esophageal malignancy is a well-described phenomenon with an in-

cidence ranging from 3.6 to 27.1%, most commonly situated in the upper aero-digestive tract [1]. To the best of our knowledge, only 11 cases of synchronous esophageal and renal cell carcinoma (RCC) have been previously described [1-5], the esophageal malignancies being a histologic subtype of adenocarcinoma or squamous cell carcinoma.

We present a patient operated simultaneously for cancer of the gastroesophageal junction with synchronous renal cell carcinoma.

CASE REPORT

We present a case of a 67-year-old woman who was admitted to the Thoracic Surgery Department. She has been complaining of difficulty swallowing for about a month. A polypoid formation was detected in the gastroesophageal region on esophagogastroscope (Fig. 1). It was biopsied and the histology yielded highly differentiated adenocarcinoma. A subsequent CT scan of the thorax and abdomen revealed a tumor lesion in the lower pole of the right kidney with a characteristic of a neoplastic process.

Fig. 1. Esophageal endoscopic view. A polypoid formation was detected in the gastroesophageal region on esophagogastroscope. It was biopsied and the histology yielded highly differentiated adenocarcinoma

Synchronous upper midline laparotomy and right lateral thoracotomy were performed. A tumor formation was found in the lower pole of the right kidney (Fig.

2) with dimensions approximately 4/4 cm. A second tumor formation (Fig. 3) was established with a 2/2 cm dimensions with the origin from the gastroesophageal junction. The Kocher mobilization of the duodenum, the right-sided colon with the right flexure was performed. The ureter was released to the level of its crossing with the right iliac vessels. Right radical nephrectomy was performed. The renal vein was ligated and divided initially and then the renal artery. The ureter was interrupted to the level of its crossing with the right iliac vessels. Several macroscopically normal hilar and paracaval lymph nodes were removed. The stomach was mobilized and a gastric tube was formed on the right gastro-epiploic artery. An extramucosal pyloroplasty by Veber was performed. Macroscopically normal lymph nodes around truncus celiacus, the left gastric artery, the initial part of the splenic and common hepatic arteries were excised. In the right pleural cavity, the intrathoracic esophagus was mobilized up to the transverse part of the azygos vein, and resected to this level. Normal paraesophageal and subcarinal lymph nodes were removed. The Gastric tube that was created before was drawn into the right hemithorax and Ivor-Lewis gastroesophago-plasty was carried out (Fig. 4).

Histological result confirmed renal cell carcinoma-chromophobic variant (well-encapsulated with connective tissue capsule), without invasion of the capsule and the surrounding adipose tissue; Furman grading – 2; there was no invasion of the hilus and the renal artery and vein; there was no tumor invasion to the surrounding adipose tissue; hilar and paracaval lymph nodes showed signs of chronic nonspecific lymphadenitis. The histological result confirmed the

Fig. 2. A, B. Macroscopic view of removed kidney. Synchronous upper midline laparotomy and right lateral thoracotomy were performed. A tumor formation was found in the lower pole of the right kidney with dimensions approximately 4/4 cm. Histological result confirmed renal cell carcinoma-chromophobic variant (well-encapsulated with connective tissue capsule), without invasion of the capsule and the surrounding adipose tissue (Furman grading – 2)

Fig. 3. Gastroesophageal junction carcinoma. A second tumor formation was established with a 2/2 cm dimensions with the origin from the gastroesophageal junction

Fig. 4. Gastroesophagoplasty

presence of a second tumor, a middle-grade adenocarcinoma of the intestinal type of gastroesophageal junction with infiltration of muscular propria; upper and lower resection lines were free of tumor infiltration; lymph nodes of truncus celiacus, liver and lien arteries showed signs of chronic nonspecific lymphadenitis; perigastric adipose and connective tissue were free of tumor infiltration.

In both locations, the regional lymph nodes were unaffected, with the patient being followed for 5 years without evidence of disease progression.

DISCUSSION

Gastroesophageal junction tumors are predominantly adenocarcinomas and are commonly diagnosed in advanced stages. For this reason, they are difficult to treat and the prognosis is poor even after radical surgical resection compared to the cancers in the distal two-thirds of the stomach. Postoperative morbidity is higher because of the need to extend the resection in a proximal mediastinal direction, i.e. the distal part of the esophagus. The five-year survival rate ranges between 29 and 39% [6].

The Siewert (S) classification remains valid for clinicians [7]. According to it, adenocarcinomas are divided into S1 (tumors in the distal part of the esophagus infiltrating the cardia), S2 (tumors in the field of anatomic cardia), and S3 (tumors in the subcardial department of the stomach infiltrating the cardia).

There is still debate regarding thoracoabdominal or transhiatal access in S1 and S2. According to many authors, the transhiatal approach has lower morbidity compared to thoracoabdominal access [8, 9]. Tran-

shiatal approach is now strongly recommended for S3 tumors and also could be used for S2 tumors. The tumor-free segment of the esophagus should be > 5 cm, while the esophageal infiltration should not exceed 2 cm. Concern about achieving a clean proximal resection line has prompted some institutions to recommend thoracoabdominal access [10]. In transhiatal access for S2 and S3, some authors routinely perform resection of the diaphragmatic hiatus to obtain clean resection lines [11]. The extent of organ resection and lymphadenectomy have also been discussed. Most S1 and S2 type gastroesophageal junction adenocarcinomas are surgically treated by distal esophagectomy and proximal gastrectomy, while distal esophagectomy and total gastrectomy are recommended for S3 tumors. In practice, it could be very difficult to define the exact location of tumors of the gastroesophageal junction, which complicates the choice between distal esophagectomy with total gastrectomy and esophagectomy with proximal gastrectomy. Regarding lymphadenectomy in S1 and S2, many authors agree that D2 lymph node dissection should be performed. The spleen is preserved unless there is macroscopic infiltration of the tumor, suspected lymph nodes of node station 10, the spread of the tumor to the major curve, and penetration to the muscle layer of the stomach or injury. The involvement of the pancreas tail left renal gland or diaphragm hiatus requires left pancreatectomy, left suprarenalectomy and circular resection of the diaphragmatic hiatus. In our case, the carcinoma of the gastroesophageal junction was in an early stage and we decided to perform gastroesophagoplasty and sparing part of the stomach with right-sided radical nephrectomy in one surgical procedure.

Deepak et al. reported the first case of a small cell carcinoma (SCC) of the esophagus with synchronous RCC [12]. Hu et al. present synchronous primary gastric cancer and RCC [13]. Illuminati et al. report the case of a Siewert type II adenocarcinoma of the cardia, synchronous with an adenocarcinoma of the sigmoid both treated at once with transhiatal esophago-gastrectomy and anterior resection of the sigmoid [14]. In our case, Ivor-Lewis gastroesophagoplasty and right nephrectomy simultaneously were performed. The patient was followed-up for 5 years without disease progression.

CONCLUSION

Concomitant gastroesophagoplasty and radical nephrectomy can be safely performed in selected patients without the development of major complications.

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