Case report

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SQUAMOUS CELL ESOPHAGEAL CARCINOMA IN A YOUNGER FEMALE PATIENT: A CASE REPORT

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Esophageal cancer is the sixth leading cause of death from malignant diseases. The two most common types of esophageal cancer are squamous cell carcinoma and esophageal adenocarcinoma. Risk factors for the development of these cancers are: age between 60 and 70 years, achalasia, smoking, alcohol consumption, African American origin and others. The main symptoms of esophageal cancer are difficulty swallowing solid and then liquid food, weight loss, pain when swallowing, cachexia, cough or hoarseness. Diagnosis is performed using radiological contrast passage of the esophagus, proximal endoscopy, computed tomography and endoscopic ultrasound. The prognosis is poor with a five-year survival of 15 to 25%. Early detection and cytostatic and surgical treatment are key to successful treatment of this disease. We present a clinical case of an unusual occurrence of esophageal cancer in a younger patient. Also we present the challenges of the diagnostic procedure and the applied therapy.

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Key words: *esophageal cancer, squamous cell carcinoma, gastroscopy*

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Introduction

Esophageal cancer is the sixth leading cause of death from malignant diseases. Five-year survival is about 15 to 25% and the best survival outcomes are achieved in the early stages of the disease (1). There has been a significant incidence increase up to six times worldwide over the past 10 years (2). The two most common types of esophageal cancer are: squamous cell carcinoma and esophageal adenocarcinoma. The incidence rate of esophageal cancer varies by localization (3). Squamous cell type shows a high prevalence in East Asia, southern and eastern Africa, and southern Europe (3, 4). The incidence rate of squamous cell cancer is very low in North America and other parts of Europe (5). Common risk factors for this type are age between 60 and 70, achalasia, smoking, alcohol consumption, African American origin, diet with a high percentage of starch without fruits and vegetables and many more. Adenocarcinoma is more common in the group of patients between 50 to 60 years old, in Caucasians and in male patients, and the main risk factor for the development of this type is prolonged gastroesophageal reflux (1, 6).

The main symptoms of esophageal cancer are: difficulty swallowing, which occurs in 80-96% of patients, primarily solid and later liquid food, weight loss, pain while swallowing, cachexia, cough or hoarseness. Manifest digestive bleeding is rare. Occurrence of anemic syndrome, tracheoesophageal fistula, development of Horner's syndrome (ptosis, miosis and enophthalmos), enlargement of supraclavicular and axillary lymph glands are characteristic of advanced stages of the disease when hematogenous metastases occur (7, 8).

The strategy and the scope of the diagnostic procedure in case of suspected esophageal cancer should be focused on a treatment plan for each individual patient. Proximal endoscopy with biopsy provides adequate diagnosis of the tumor. Abdominal MSCT and endoscopic ultrasound is a good method for obtaining precise tumor localization, and even for staging and classification of tumors according to TNM categories in 80% of cases. In order to rule out bone metastases, bone scintigraphy is often used, while in the case of advanced tumors of the esophagogastric junction, laparoscopy may be performed to rule out peritoneal carcinosis (8, 9).

Case report

We present the case of a 40-year-old female patient who contacted a gastroenterologist due to occasional difficulty in swallowing of solid food and pain when swallowing that first appeared three months earlier. She vomited food on a couple of occasions without the presence of blood, but denied losing weight. Because of enlarged lymph glands on the right side of the neck that the patient noticed by herself, an echosonographic examination of the thyroid gland and soft tissues of the neck was indicated.

Multiple round lymph nodes were described supraclavicularly up to 1 cm in diameter on the left side, and up to 23 mm on the right of the neck (Figure 1). Gastroenterologist then indicated the proximal endoscopy to be performed, which determined infiltrative-vegetative, locally exulcerated constriction of the esophagus located 18 cm from the front teeth. Biopsies were taken and sent for pathohistological analysis (Figure 2). Immunohistochemical analysis revealed the presence of neoplastic cells expressing CK19 and p53 proteins which then led to the diagnosis of squamous cell esophageal carcinoma (Figures 3, 4).

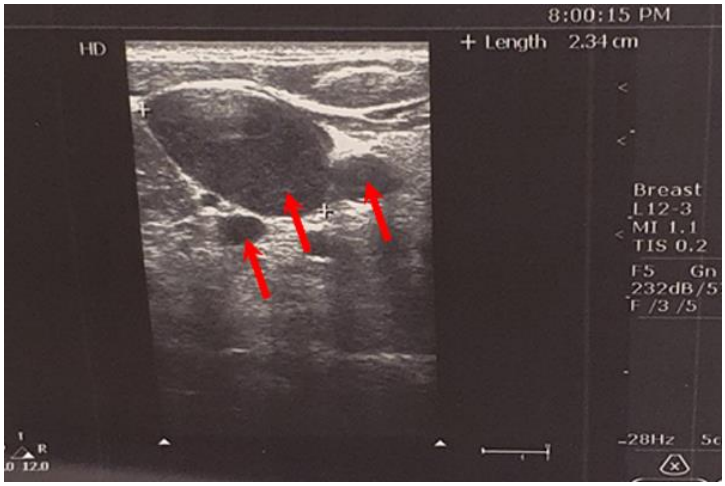

Figure 1. Echosonographic examination of the thyroid gland and soft tissues of the neck - Enlarged lymph glands with a largest diameter of 23 mm on the right side of the neck

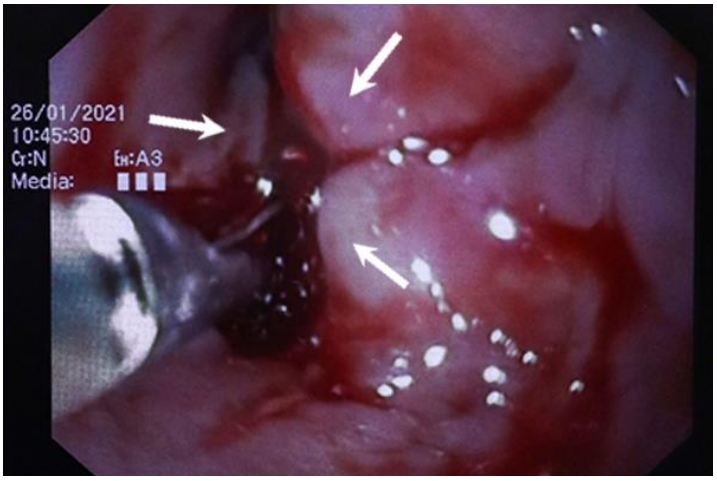

Figure 2. Proximal endoscopy - Infiltrative-vegetative locally exulcerated constriction of the esophagus

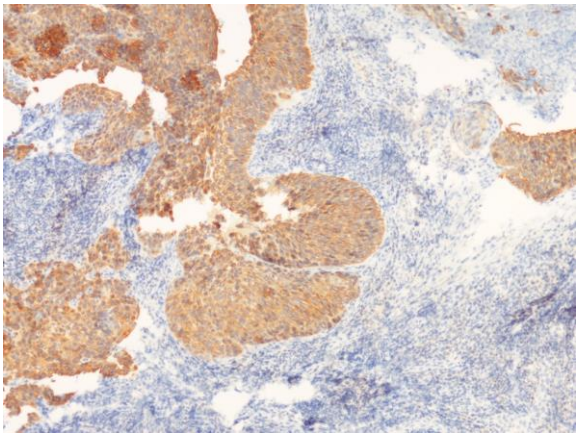

Figure 3. Squamous cell carcinoma – Neoplastic cells express CK19 (immunohistochemistry, 10 x 0.25)

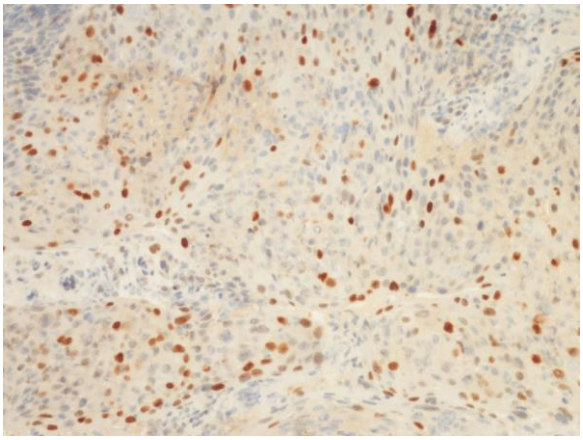

Figure 4. Squamous cell carcinoma – Intranuclear staining of neoplastic cells with p53

The radiography of the esophagus with contrast was performed as a part of preoperative preparation, and computed tomografy of the chest to determine the staging of a cancer. The passage of the esophagus shows a constriction of the lumen in the proximal third of the thoracic segment of the esophagus in a length of 3-4 cm with proximal dilatation of the esophagus (Figure 5). Computed tomography of the chest showed a segmental circumferential thickening of the esophageal wall with necrosis fields at a distance of about 40 mm from the floor of the oral cavity. The described wall thickening has a total AP diameter of up to 30 mm. The described tumefact was localized along the posterior wall of the trachea without the presence of communication (Figures 6, 7). Enlarged lymph nodes up to 27 mm in diameter were observed in the upper mediastinum, and several enlarged, necrotically altered lymph nodes up to 26 mm in size were observed on the right side of the neck. The medical records on the liver and other abdominal organs were normal. The patient was referred to the Clinic of Digestive Surgery of the University Clinical Center of Serbia, where a bronchoscopy was performed and the medical findings were normal. Further neoadjuvant chemoradiotherapy treatment is indicated due to the stage of the disease.

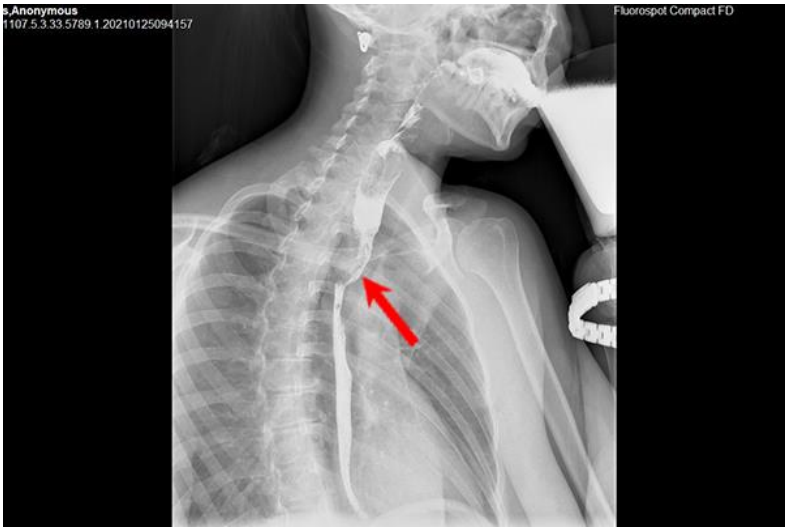

Figure 5. The passage radiography of the esophagus – Constricted lumen of the esophagus with proximal dilation (lateral section)

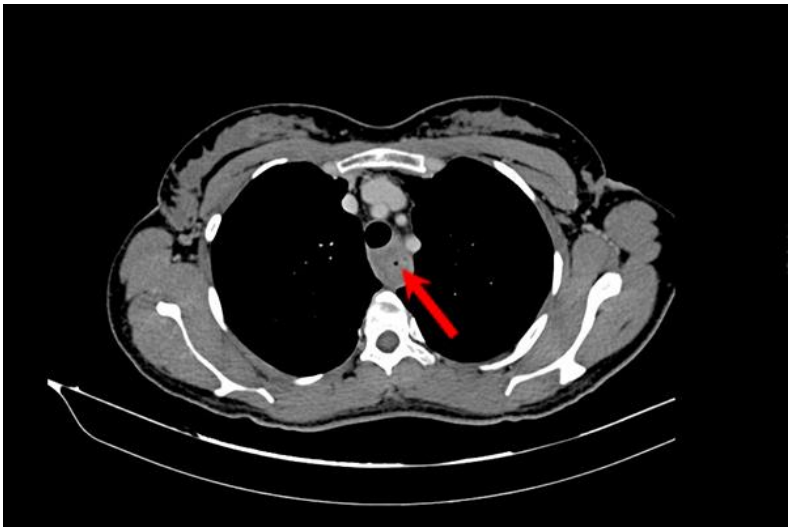

Figure 6. Computed tomography of the chest –
Circumferential constriction of the esophageal lumen

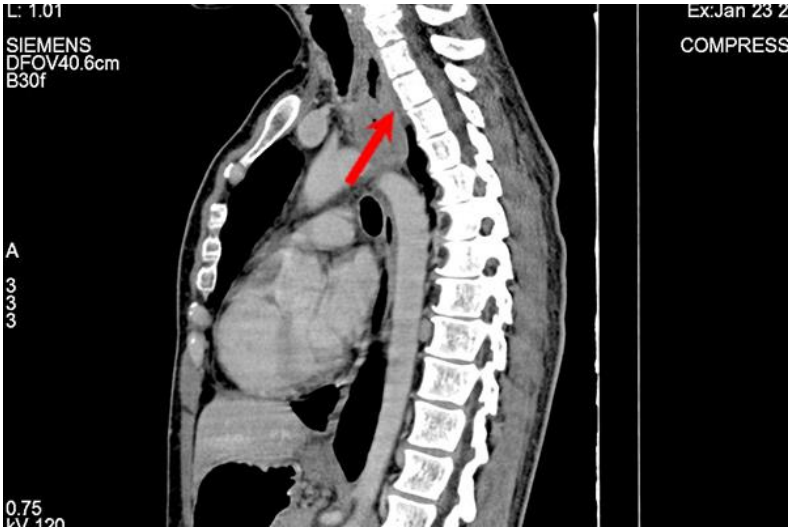

Figure 7. Computed tomography of the chest (lateral section) –
Circumferential constriction of the esophageal lumen

Due to the impossibility of swallowing food, but in order to provide necessary diet of a patient, a surgical nutritional jejunostomy was performed. The intervention went smoothly without complications. The patient was then referred to the gastroenterology council of the University Clinical Center Niš which suggested further implementation of preoperative chemo-radiotherapy.

Discussion

Esophageal cancer ranks eighth most common tumor worldwide. In recent years there has been an increase in the incidence of esophageal cancer in developed countries (10). Esophageal cancer is most commonly diagnosed in age between 60 and 70 years, with a mean age of 67 years. Patients

under the age of 45, as in this case, are only 3.2% of all patients with esophageal cancer (11). Squamous cell carcinoma and esophageal adenocarcinoma together make up more than 95% of all esophageal tumors (10). Major risk factors for squamous cell carcinoma are: older age, smoking, alcohol consumption, nitrosoamine exposure and caustic damage to the esophagus, of which our patient did not have any. Some previous diseases and lesions can be a good basis for the development of this type of cancer, the most significant are Plummer-Vinson syndrome and achalasia, and for adenocarcinoma it is Barrett's esophagus (7). Squamous cell histological type is the most common type of cancer in women, while in men adenocarcinoma is more common. However, the incidence of squamous cell carcinoma is generally higher in men than in women in most countries (12). A study of esophageal cancer in younger individuals done by Dawsey S.P. and coworkers on a sample of 109 patients found a higher incidence of the disease in younger men under 30 years of age compared to women and in a ratio of 1.5 : 1, with the largest number of male patients suffering from squamous cell carcinoma (13). Numerous reports suggest that although younger patients have similar symptoms as older, a much smaller number will seek medical attention, so the diagnosis is made in advanced stages of the disease (14). Saddoughi S. et al. conducted a research on esophageal cancer in a group of patients under 45 and found out that these patients had better overall survival than older patients (15).

Similarly, Wallbohmer et al. found better five-year survival in patients under 50 years of age who were on neoadjuvant therapy (16). However, other publications, such as the one Oezcelik et al., have determined that the younger patients seek for medical help in later stages which was the case with our patient who was diagnosed in the advanced stage of the disease (14). Given the different results of esophageal cancer survival in younger patients, no definitive conclusion can be made about the relationship between age and time of diagnosis. Despite the low five-year survival rate, early diagnosis is crucial in the treatment of esophageal cancer. Survival data are encouraging given that there is an increase among younger people with esophageal cancer (15).

Conclusion

Esophageal cancer is a disease of older age. There is currently an increase in the incidence of the disease among younger people, and the disease most often occurs in men. The squamous cell type is the most common form of this tumor. Five-year survival depends on early diagnosis, age of the patient and applied surgical and oncological therapy. In order to improve the results of treatment, it is necessary to conduct early diagnosis with the appearance of the first symptoms of the disease, with the application of all available diagnostic procedures and the earliest and most aggressive application of therapeutic modalities. It is possible that such an approach would improve the success in combating this vicious disease.

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Prikaz bolesnika

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SKVAMOCELULARNI KARCINOM JEDNJAKA KOD MLAĐE BOLESNICE: PRIKAZ SLUČAJA

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Karcinom jednjaka je šesti vodeći uzrok smrti od malignih bolesti. Dva najčešća tipa karcinoma jednjaka su: skvamocelularni karcinom i adenokarcinom jednjaka. Faktori rizika za nastanak ovih karcinoma su starosni uzrast od 60 do 70 godina, ahalazija, pušenje, konzumiranje alkohola, pripadnost crnoj rasi i dr. Glavni simptomi karcinoma jednjaka su otežano gutanje čvrste, a potom i tečne hrane, gubitak na telesnoj težini, bolovi prilikom gutanja, kaheksija, kašalj ili promuklost. Dijagnostika se vrši primenom radiološke kontrastne pasaže jednjaka, proksimalne endoskopije, kompjuterizovane tomografije i endoskopskog ultrazvuka. Prognoza je loša sa petogodišnjim preživljavanjem od 15% do 25%. Rano otkrivanje i citostatsko i hirurško lečenje ključni su za uspešnu terapiju ove bolesti. Prikazujemo klinički slučaj neuobičajene pojave ezofagealnog karcinoma kod bolesnice mlađe životne dobi. Prikazani su izazovi dijagnostičkog postupka i primenjena terapija.

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Ključne reči: *karcinom jednjaka, skvamocelularni karcinom, gastroskopija*