SYSCHRONOUS PRIMARY THYROID, LUNG AND COLON CANCERS: A CASE REPORT

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ABSTRACT

Multiple primary neoplasms are relatively rare, but their incidence has increased because of aging and improvements in diagnostic imaging. There are many ways to classify, but nowadays, multiple primary cancers are again classified as synchronous and metachronous, the time is 6 months after the first primary injury detection, some authors get 12 months.

Our clinical case is a 66-year-old man, prolonged exposure to risk factors for cancer. The patient was diagnosed with different types of primary cancer, colon cancer, thyroid cancer, lung cancer, and stomach cancer. The patient was treated according to the general clinical guidelines suitable for the disease type and the stage of the disease at the time of detection. Lesson learned is the importance of screening tests, attitudes, and comprehensive views of doctors for cancer patients, avoiding missing injuries, affecting the quality of treatment for patients.

I. INTRODUCTION

Multiple cancers are usually defined as many primary malignant tumors of different histological origins in one person. Along with the development of diagnostic techniques, prolonged life expectancy as well as the rise of cancer types, there are increasing numbers of reports about multiple cancers. Most of them are two types of cancers. [1,2].

The definition of multiple cancers was first proposed by Moertel in 1977 [2,3], consisting of 3 groups. Accordingly, a group I includes, multiple primary cancers occurring in organs with the same histology, group II includes multiple primary cancers that originate from different tissues, and group III consists of cancers from different tissues and organs. Group, I is subdivided into group A, which consists of cancers that occur in the same tissue and organ, group B, which includes cancers from the same tissue but different organs, and group C, which includes cancers occurring in bilateral organs such as the lungs, ears, eyes, kidneys... excepting metastasis. Nowadays there is a new classification of multiple cancers as simultaneous and metachronous. Patients who were diagnosed with multiple cancers at the same time or within 6 months are termed simultaneous cancer, and if the new type of cancer detects after 6 months, it is termed as metachronous [4]. Some studies take like 1 year in this classification [5]. Despite this, the correct diagnosis, giving the right regimen remains a challenge for clinicians.

II. A CLINICAL CASE REPORT

A 66- year-old male patient who is a mechanic exposed to industrial oil, gasoline, diesel, and vehicle engine emissions for years, has no family history involved. In 2004, the patient underwent surgery to remove the left lobe tumor (of unknown nature). 9 years later (2013), manifestations of abdominal pain and mucus, blood in stool, the patient underwent surgery to remove the

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Date of receipt: 01/6/2021
Date of scientific judgment: 04/7/2021
Reviewed date: 15/8/2021

left half of the colon and the histological diagnosis was well - differentiated adenocarcinoma, T2 (Figure 1). The patient was periodically monitored. In September 2015, the front of the neck tumor was detected with TIRADS 4B ultrasound, FNA: Malignant cell images. Patients underwent thyroidectomy, cervical lymphadenopathy, and diagnosis of histology: papillary thyroid cancer (Figure 2), followed by I-131 supplementary with dose 100 mCi. In June 2017, expressing chest pain, dry cough, patients are examined in the thoracic surgery department and got a scan of the chest. A lung tumor was detected, then a biopsy was performed through the chest wall. Diagnosis: adenoma-carcinoma lung stage II (Figure 3), the immunostaining for CK7 and TTF1, and absence of the staining for CK20 and CK5/6. The patient had no surgical indication and was treated with concurrent chemoradiation therapy. After treatment, the assessment was a partial response according to the RECIST standard. In March 2019, manifestations of headache, vomiting of blood, endoscopic examination detected ulcers in the pyloric antrum (Figure 4), a biopsy of pyloric tumors, diagnosis of pathology tissue: institute adenoma-carcinoma. At the same time, the CT scans of the brain detected multi-brain metastases (Figure 5). The patient was treated with active anti-cerebral edema, full-brain radiotherapy, maintenance of capecitabine.

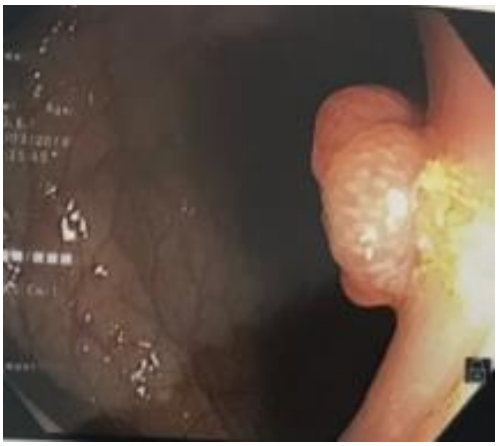
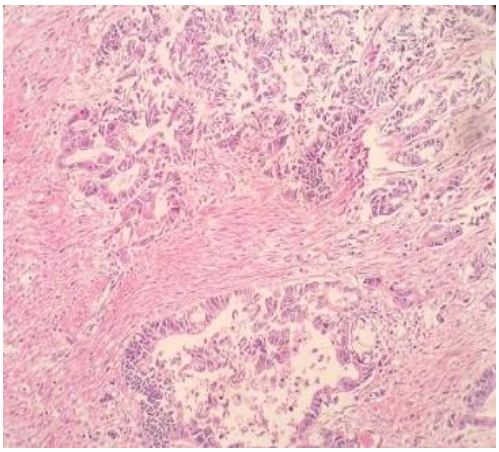


Fig 1: Left colon tumor via endoscopy



Colon adenocarcinoma (H&E, 20^{x})

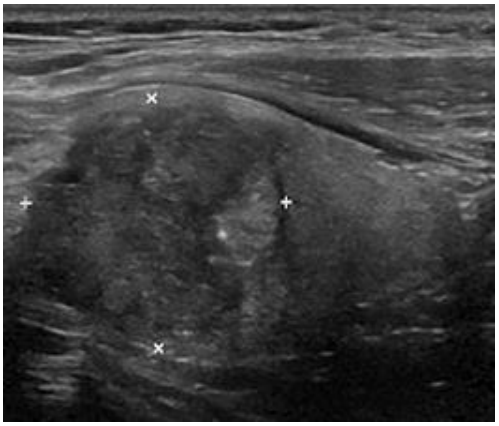
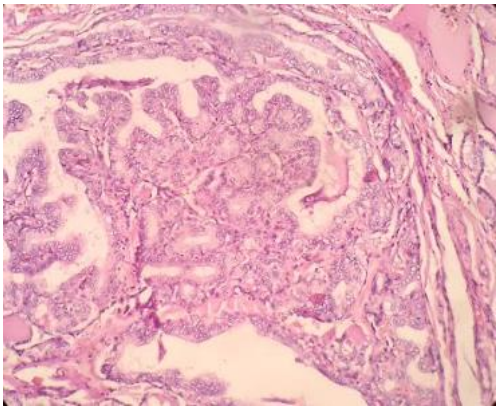
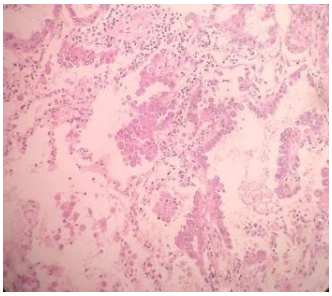


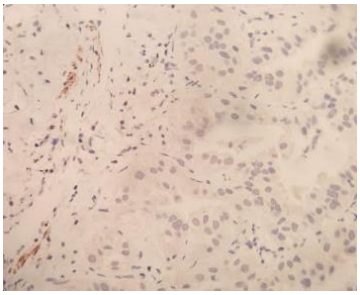
Fig 2: Thyroid ultrasound image



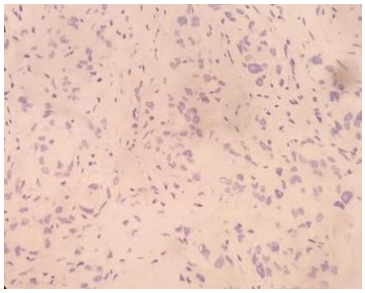
Papillary thyroid cancer (H&E, 20^{x})



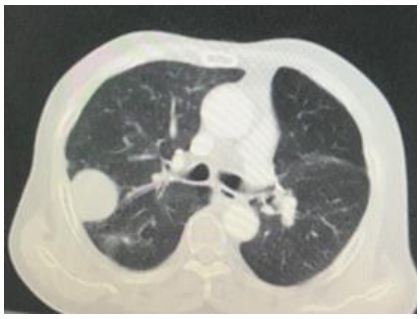
H&E

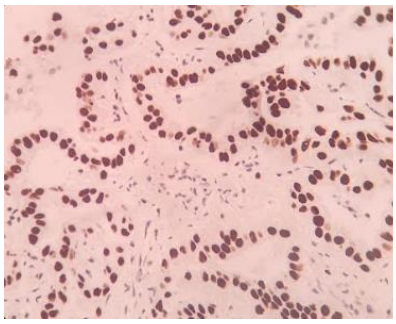


CK56 (-)



CK20 (-)





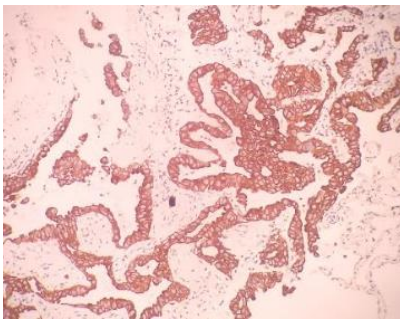


Fig3: CT of the chest showing neoplastic in the under right lung Immunohistochemical staining: positive TFF, CD7 (20^{x})

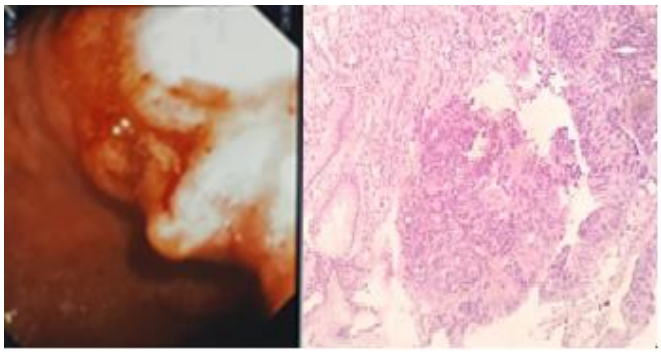


Fig 4: Pyloric antrum cancer

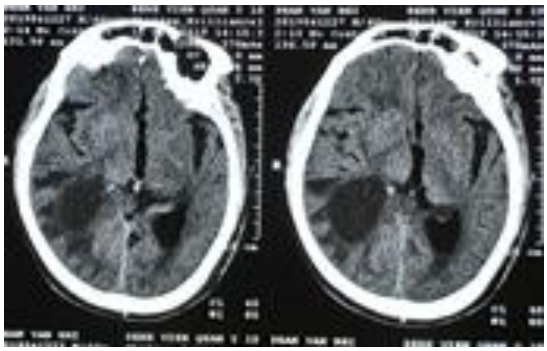


Fig 5: Multi-brain metastases

III. DISCUSSION

From the first lesion detection to the detection of stomach cancer is 6 years (2013-2018) - the multi-cancer classification is metachronous. Every time detects new lesions, the patient had biopsy for pathology diagnosis. This is following the principle of diagnosis.

The first question is: did we miss the lesions in the first time of diagnosis? (due to many causes, technical conditions or equipment, or constraints of the health insurance regime).

In this case, in our opinion, it is less likely. Because: the patient did not show any symptoms at these organs. This is also the reason why we do not mention the screening of lesions at these organs

The second question is: If in fact, the patient had many injuries at the first time of diagnosis, whether the doctor indicated

biopsies at many positions synchronously or not?

In our view, if the patient has no symptoms and accidentally detects lesions in many organs, the biopsy procedures of all positions must also be very considered because it will cause stress for the patient.

In fact, doctors usually focus on the lesion which is believed the originated and caused significant symptoms for the patient, and others are through to be metastatic lesions. Since multi-cancers is a rare disease, the mention of one more cancer in the person is usually set later. Therefore, in our view, even if we think of metastases, in locations where maximum intervention is possible, we should still have a biopsy for pathology results. This will limit the omission of lesions and timely treatment upon detection [2]. In our case, the first diagnosis was a lung tumor of unknown originate after surgery, the second cancer detection was left colon cancer with symptoms: blood in stool, the next detection of thyroid cancer and stomach cancer. Most of these types of cancers are detected when clinical manifestations are present. At the first time of diagnosis, the patient had not received a PET/CT scan to detect lesions in another locations that other techniques could not detect.

The hypothesis of the origin of multiple cancers is the random development with different mechanisms but it relates to family factors, deficiency immune and genetic, prolonged exposure to risk factors such as radiotherapy, cancer treatment chemicals [1, 6, 7, 8].

In our clinical case, it is also possible that patients treated with iodine 131 and others risk factors such as the occupational history of patients exposed to industrial oils, gasoline, diesel, engine fumes. These risk factors have been proven in many studies. Previously reported cases of multiple cancers are mainly cancers of the respiratory system, gastrointestinal tract, and urogenital tract [9]. Autopsy reports show that prostate cancer is the most common type of cancer in multiple cancers and is common in older men. The clinical case we report includes 4 types of cancer: thyroid, lung, sigma colon, and stomach with different histology of Moertel's class III or multiple metachronous cancer according to the new classification definition. Although all lesions were not detected early and at the same time, we selected the optimal treatments that follow clinical guidelines. Currently, the patient has multi- brain metastases and receives full-brain radiotherapy, palliative care. The time from diagnosis of the first initial cancer to the present is 6 years. However, if the lesions were detected early at the same time, treatment can last longer the progression-free survival.

IV. CONCLUSION

Through this case, we find that the correct diagnosis of the stage and the control of all lesions in a patient is essential. Under permitted conditions (techniques, equipment, economic conditions of patients and patient health conditions) ... a histological diagnosis should be simultaneously made for all lesions, especially when the lesions are not of the same organ or are suspected to be not the same nature.

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