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Multiple primary cancers: a case report and literature review

Faouzia. Kambouche [1], Mokhtar Riadh Mohammed [2]

[1]*Pulmonology department of university hospital center of Mostaganem, Algeria*
[2]*Faculty of Medicine of Mostaganem,University of Abdelhamid Ibn Badis . Algeria*

Abstract: The fortuitous discovery of synchronous double primary cancers of the lung and stomach is relatively rare, but the discovery of triple primary cancers in one patient remains exceptional.
The discovery of triple primary cancers in a single patient remains exceptional. This coexistence corresponds to the syndrome of multiple primary malignancies or multiple primary cancers (MPC). We present a case of synchronous association of squamous cell carcinoma of the lung and gastric adenocarcinoma with a history of mature squamous cell carcinoma of the larynx.

Keywords: *larynx; lung; stomach; adenocarcinoma; squamous cell carcinoma.*

I. Introduction

The incidental discovery of synchronous double primary cancers of the lung and stomach is relatively rare, and the coexistence of triple primary cancers of the larynx, lung, and stomach in a single patient remains exceptional. This coexistence corresponds to the syndrome of multiple primary malignancies or multiple primary cancers (MPC). Its incidence has increased in the last few decades. This may be theresult of advances in cancer diagnosis and therapeutic strategies [1].
We present a case of synchronous association between squamous cell carcinoma of the lung and gastric adenocarcinoma with a history ofmature squamous cell carcinoma of the larynx.

II. Observation

This is a 62-year-old patient with a history of mature squamous cell carcinoma of the larynx treated with chemo radiotherapy. Six years later, he presented to the pulmonology emergency department with left chest pain and a productive cough associated with dysphagia on solids, with a left cavitary image on chest radiography. On clinical examination, the patient was in good general condition. Pleuro- pulmonary and ENT examinations were unremarkable.
Flexible bronchoscopy showed an ulcerating-bourging formation in the culmen. A biopsy of the mass and immunohistological study concluded it to be a primary, moderately differentiated squamous cell carcinoma of bronchopulmonary origin.
Oesogastroduodenal fibroscopy revealed an ulcerative process in the supra-cardia (oeso-gastric junction), with immunohistological fin- dings in favor of a well-differentiated adenocarcinoma.
As part of the extension work-up, a thoraco-abdomino-pelvic CT scan revealed a voluminous, thick-walled, hydroaerobic image, in con- tact with the left pulmonary artery, with no fatty border, and the thoracic wall, with pleural thickening and no bone lysis, and multiple mediastinal adenopathies (bilateral pre-tracheal, pre- and subcarinal, aortic-pulmonary).
Abdominal: circumferential, budding parietal tissue thickening involving the oesocardial junction, with pre-hepatic and pre-splenic ade- nopathies.

The diagnosis of primary bronchogenic cancer associated with gastric cancer was accepted; genetic mutations were indicated but not performed due to a lack of resources.
The patient categorically refused surgery, and consequently underwent radio-chemotherapy.

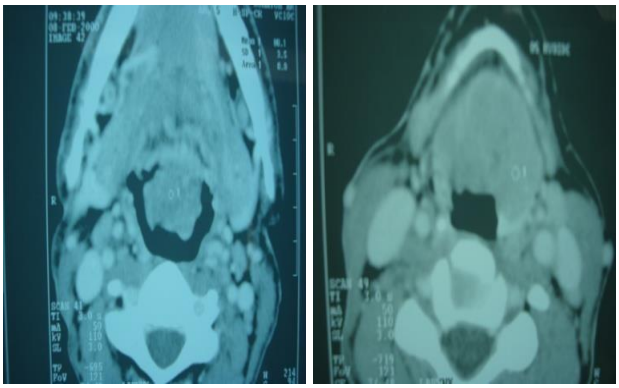

Fig. 1: Facio-Cervical Scan Performed 06 Years Ago for Diagnosis and Diagnosis and Extension of Laryngeal Cancer.

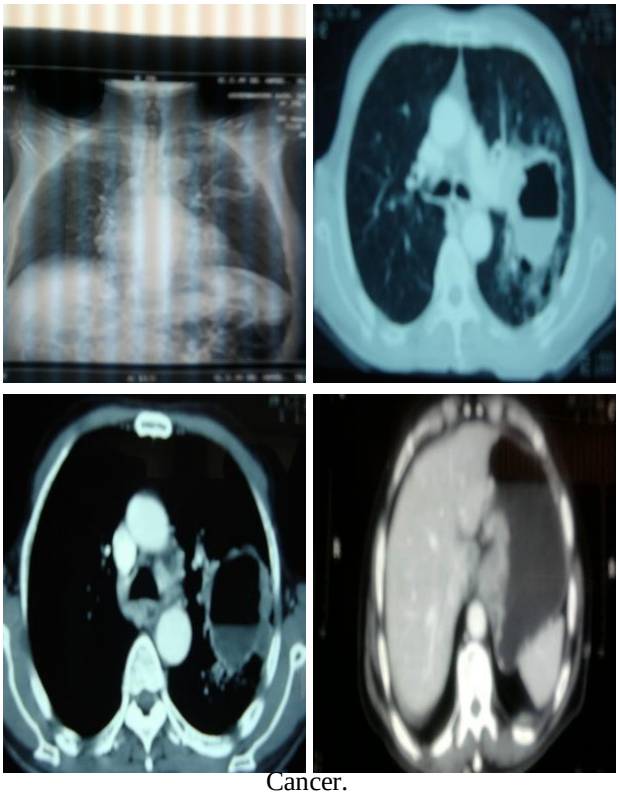

Fig. 2 : Thoracoabdominal CT Scan Revealed: A Voluminous Image in Contact with the Left Pulmonary Artery without A Fatty Border and the Chest Wall without Bone Lysis with Multiple Mediastinal Adenopathies. On the Abdominal Level: A Circumferential, Budding Parietal Tissue Thickening Involving the Oesocardial Junction and Extending to the Lesser Curvature, Measuring 20mm in Places, with Pre-Hepatic and Pre-Splenic Adenopathy.

III. Discussion

MPC were first described in the 19th century (1889) by Billroth [2]. The coexistence of several primary cancers in a single patient has been described in the oncological literature, with a frequency ranging from 5.5% to 8.5% for all combined cancers. They are defined by the existence of more than one primary malignant tumor in

different organs, or of two or more primary malignant tumors developed from different cell types within the same organ. Cancers are said to be synchronous when diagnosed less than six months apart, and metachro- nous if diagnosed more than six months apart [3].

Many theories based on hormonal, environmental, genetic, immunologic, infectious, or iatrogenic data have been proposed to explain the occurrence of MPC [4], [5]. Technical advances in cancer diagnosis and the increasing improvement of complementary examinations have increased the incidence of multiple primary cancers being simultaneously diagnosed. Positron emission tomography (PET) and tomodensitometry have demonstrated their great utility in the incidental detection of synchronous malignancies [6]. Treatment of multiple cancers depends on the staging of each individual cancer.

The complexity of our case lies in the simultaneous discovery of a gastric carcinoma of different histology during an extension work-up of a primary lung cancer, which requires a specific treatment regimen and has a poor prognosis.

IV. Conclusion

The diversity of primary cancers is not necessarily a factor in a poor prognosis. The clinician must always consider the possibility of multiple primary cancers. Rigorous disease assessment and regular patient follow-up are essential to detecting a second site in time. However, early detection allows for prompt treatment and increases the cure rate of the disease.

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