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Synchronous Papillary Thyroid Carcinoma and Right Colon Cancer

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Abstract **Original Research Article**

Multiple primary cancers (MPC) are relatively rare, but their incidence has been increasing in recent decades. This can be the result of advances in cancer diagnostic and therapeutic strategies. We present a new observation of synchronous primary thyroid and colon cancers occurring in a 55-year-old patient and we discuss, in the light of a review literature, the various environmental factors, genetic and iatrogenic involved in the appearance of a second primary cancer.

Keywords: Multiple Primary Cancers, Thyroid Cancer, Colon Cancer.

INTDRODUCTION

The improvement of management of the various cancers has considerably increased the chances of survival of cancer patients. However, a significant number of these patients are at risk of develop a second primary cancer [1, 2]. This coexistence in a patient of several malignancies is a rather rare phenomenon that corresponds to the syndrome of multiple primary malignancies or primary cancers. Through this work, we present a case of synchronous primary thyroid and colon cancers.

CASE REPORT

A 55-year-old male known to have a goiter gradually increasing in volume over 10 years. No comorbid conditions were reported nor was there any family history of colorectal cancer (CRC) or thyroid diseases. He present for 04 months an unexplained anemic syndrome and markedly weight loss, without other associated digestive signs, specially no melena. Upon examination he looks cachectic and pale, her vital signs were within normal limit. Physical examination showed bilateral swelling of the thyroid lobes but no associated cervical lymphadenopathy. Abdominal examination did not reveal any tenderness, organomegaly or palpable masses. Laboratory parameters revealed malnutrition with albumin level of 3 .0 g/dL (normal range, 3.4 to 4.8), HB: 9.0g/dL, TSH: 0,30. He underwent colonoscopy wich showed a stenosing ulcerative-budding process of the right colon impassable by the colonoscope and pathological examination of this process revealed a moderately differentiated colic adenocarcinoma. The abdomino-pelvic CT scan with contrast injection showed a parietal circumferential thickening of the ascending colon near the right colic angle with multiple suspicious ganglia of the right mesocolon. Neck and chest computed tomography (CT) scans revealed a voluminous plunging goiter measuring 13 cm coming into contact with the arch of the aorta. No suspicious lung lesions were identified. The patient started on TPN to build up her nutritional status and underwent a right colectomy and a total thyroidectomy (**Fig. 1 and 2**). Pathologic results disclosed a moderately differentiated invasive mucinous adenocarcinoma of right colon with lymph node involvement (**pT4aNlaM0**) and a 13 cm papillary thyroid cancer of the right lobe. All surgical margins are free of tumor. The patient was followed with adjuvant chemotherapy for the colic cancer and radioactive iodine therapy and lifetime inhibiting doses of thyroxine for her thyroid disease.

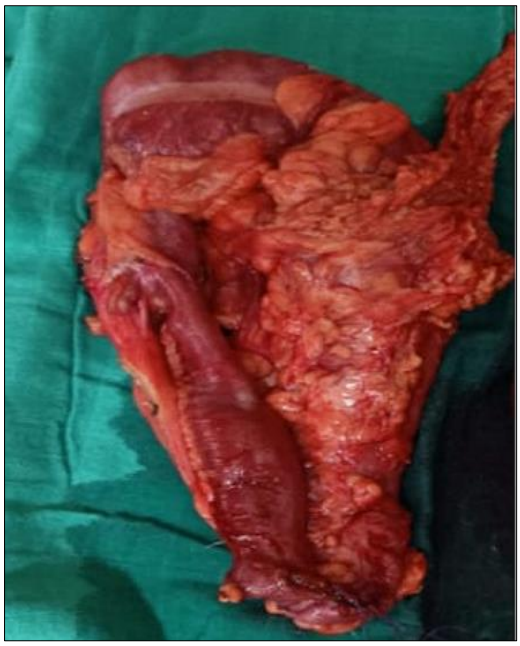

Figure 1: Resected specimen of right hemicolectomy

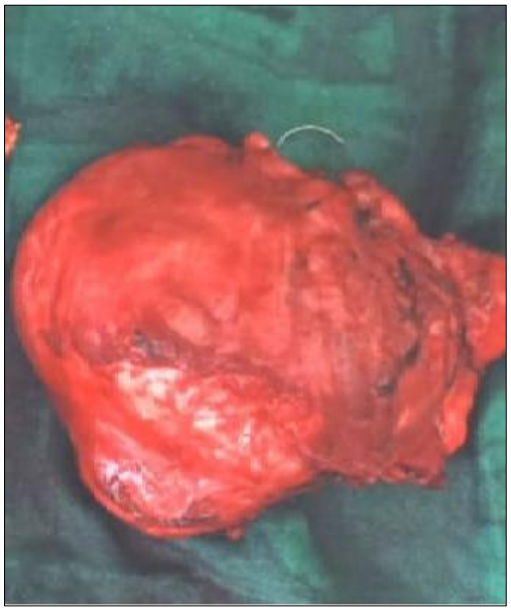

Figure 2: Resected specimen of total thyroidectomy

DISCUSSION

Multiple primary cancers (MPC) are defined by the presence of primary malignancies of different histological origins in the same person [3]. The number of patients with multiple primary cancers is increasing due to advances in diagnostic procedures, longer life expectancies, and improved long-term survival of patients with malignancies [3]. The incidence of multiple primary cancers is rare and varies from 1.8% to 11% [4]. The second primary lesion may be synchronous if diagnosed simultaneously or within 6 months of the diagnosis of the first tumor, and metachronous if diagnosed after 6 months [5]. Many theories based on hormonal, environmental, genetic, immunological factors have been suggested to explain the occurrence of MPC [4]. Papillary thyroid cancer is in most cases sporadic but can be part of a familial context or associated with other cancers, especially colorectal cancer, as well as other autosomal dominant pathologies such as familial adenomatous polyposis (FAP) and Gardner syndrome, Cowden syndrome, Werner syndrome, Carney complex, PeutzJeghers syndrome, and tuberous sclerosis [4-6]. Some studies describe a evidence linking between papillary thyroid cancer and other tumors such as right colon tumors, malignant melanoma, sarcoma, breast, kidney and ovarian tumors [7]. In patients with papillary thyroid cancer, the presence of malignant lesions in other sites (breast, larynx, basal cell carcinoma, colon and rectum, cervix, endometrium, ovary, lung) varies between 3.5% and

20% [7]. Of all the combinations, 15% are represented by the colon and rectum. The diagnosis of extrathyroid tumors can be synchrnous in 8% of cases and metachrone in 12% [8]. Some authors recommend an annual fecal occult blood screening test in patients with a history of papillary thyroid cancer [6]. Careful screening for colorectal cancer is recommended for relatives of a family with two or more members with familial papillary cancer. Moreover, patients with FAP, Gardner syndrome or colon cancer are at high risk of papillary thyroid cancer [7]. Clinical examination of the thyroid should be systematic in all young patients, especially women, who are being followed for FAP or colon cancer [7].

Patient Perspective: Our patient was informed about the all procedure, complication and outcome, and she has agreeing about it.

Informed Consent: The patient gave his informed consent for participation in our study.

Competing Interests: The authors declare no competing interest.

Authors' Contributions

Patient management: SB, MO and MS. Data collection: SB, SS, DD, and YM. Manuscript drafting SB and DD. Manuscript revision: MA, OM and MS. All authors approved the final version of the manuscript.

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CONCLUSION

Multiple primary cancers are rare. However, their incidence has recently increased. The possibility of a second or third injury malignancy should be considered in patients with a first cancer. The multiplicity of primary cancers itself is not necessarily a factor in a poor prognosis. However, a early detection will allow for rapid and will increase the cure rate of the disease.

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