Incidental Intraoperative Discovery of Colonic Growth in a Patient with Esophageal Carcinoma– Lessons Learnt!

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Abstract Presentation of more than one malignancy at the initial time of diagnosis is rare. Recently we encountered a patient who was diagnosed with carcinoma esophagus found to have another incidental growth in his right colon at the time of surgery. When managed appropriately such patients do well depending on the stage of their malignancy. Here in this article we have reviewed the literature pertaining to multiple primary malignancy.

Keywords Double malignancy · Carcinoma esophagus · Carcinoma colon

Case Report

A 54-year-old man presented with complaints of progressive dysphagia and weakness for the past 2 months. Dysphagia was more for solid food than liquid diet. He also had history of loss of appetite and loss of weight, about 5 kg in 2 months. He was a known smoker and alcoholic. On general physical examination, he revealed pallor; otherwise his general condition was unremarkable. Abdominal examination did not reveal any organomegaly or free fluid and was essentially normal. His routine blood counts revealed anemia (hemoglobin 8 g/dl). His renal and liver function tests were reported as normal.

Upper gastrointestinal endoscopy revealed ulcerative lesion in the esophagus, starting at 30 cm from incisor and extending up to 35 cm. Biopsy from the ulcer was called out as squamous cell carcinoma. Contrast-enhanced computerized tomography of the thorax and upper abdomen showed wall thickening, involving midthoracic esophagus at the level of the fifth and sixth thoracic vertebrae, with no periesophageal disease or distant metastasis. He was taken up for transthoracic esophagectomy with cervical esophagogastric anastomosis. The right fifth intercostal space approach was used for complete circumferential mobilization of thoracic esophagus from thoracic inlet to diaphragmatic hiatus along with periesophageal lymph nodes. The abdomen was opened by midline supra-umbilical laparotomy incision for mobilization of the stomach based on the right gastroepiploic and right gastric vessels. During laparotomy, a strictorous growth involving cecum and ascending colon was incidentally discovered (Fig. 1). Hence, the therapeutic plan was changed to include right radical hemicolectomy with ileocolic anastomosis. After completing ileocolic anastomosis, the gastric tube was prepared and cervical esophagus was mobilized through curved cervical incision. The esophagus was divided and the gastric tube was passed through the posterior mediastinum to the neck. An esophagogastric anastomosis was performed in a single layer.

The final histopathology report was called out as adenosquamous carcinoma of the esophagus, involving the muscular wall with no nodal metastasis and tumor-free margins (stage pT2N0M0, Fig. 2); hemicolectomy specimen was reported as moderately differentiated adenocarcinoma colon with mucinous component, all the lymph nodes and both the cut margins were free of tumor (Astler Collier staging B2). Postoperatively, he was referred to the medical oncology department for adjuvant chemotherapy. He completed 6 months of FOLFOX chemotherapy. Now after 38 months of surgery (at the time of article going to press), he is on regular follow-up, without any evidence of disease.

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Fig. 1 Specimen of radical right hemicolectomy and esophagectomy

Discussion

The reported incidence of multiple primary cancers is 0.7–11 % [1–4]. The primary malignancies arising in multiple organs in a person could be synchronous or metachronous. Synchronous tumors are diagnosed at the same time or within a period of 2 months of the diagnosis of the index disease. Metachronous second primary cancers are those diagnosed after an arbitrary period of 2 months of diagnosis of the primary neoplasm and are relatively more common [5]. With successful treatment of the first malignancy, survivors have an increased risk of manifesting with either treatment-related or de novo second malignancies. Synchronous double or multiple malignancies are still rare [6]. The reported incidence of synchronous cancers in patients with esophageal cancer is 3.6–27.1 % [7–9], most common site being upper aerodigestive tract [9, 10]. In a study reported from Hong Kong, the incidence of simultaneous non-esophageal primary in patients with esophageal squamous cell carcinoma

Fig. 2 Microscopic slide photograph of adenosquamous carcinoma esophagus

was 3 % [9]. Synchronous multiple primary tumors of the gastrointestinal tract are not uncommon. Some of these can be explained by common etiological risk factors such as smoking and alcohol for esophageal and pancreatic cancers, defects in the DNA mismatch repair genes, leading to hereditary non-polyposis colorectal cancers with tumors in uterus, ovary, small bowel and pancreas, FAP gene mutation, leading to colonic polyps, tumors and other multiple site tumors. In our case, alcohol consumption could be the probable risk factor [11].

In patients with known cancer, work-ups often focus on the primary disease. Such an approach can miss the detection of any coexisting second primary tumor. Further, the finding of an unexpected lesion at surgery can have a significant impact on the patient's outcome [12]. At least one case of intraoperative detection of colonic cancer in a patient with esophageal cancer has been documented earlier [9].

Following total esophagectomy, most commonly used conduit for restoration of gastrointestinal continuity is the stomach owing to various advantages claimed by several authors. Few prefer to use the colon, especially the left colon based on left colic vessels. In the scenario reported by us, it would have posed problems. Hence, we strongly feel that patients with gastrointestinal cancers should be thoroughly evaluated to exclude coexisting second malignancies. Pre-operative knowledge of the existence of multiple primary tumors would help the operating surgeon to discuss the various issues within the multidisciplinary tumor board and also with the patient himself and plan the operation accordingly. It would also avoid the unnecessary staged procedures to prevent medicolegal issues such as the patient under anesthesia cannot give consent for the additional procedure. One way of diagnosing remote coexisting second primary tumors would be wide application of whole body positron emission tomography/computerized tomography (PET/CT). In a study reported by Ishimori et al., whole-body PET/CT detected new, unexpected 18 F-FDG-avid primary malignant tumors in at least 1.2 % of patients with cancer [12]. Agress and Cooper also have reported a detection rate of 1.7 % using whole body 18 F FDG PET in patients with known or suspected malignancies [13]. Whether such an approach is cost effective is a concern to be addressed in future. At least in scenarios where PET/CT is being used in the early work-up of the presenting malignancy, an attempt should be made to look for the presence of the second malignancy. Differentiating second primary neoplasms from an atypical metastasis of the known malignancy can be challenging. The unusual sites of FDG uptake should not be dismissed as metastatic sites, and further imaging or histological evaluation should be undertaken to rule out possible second malignancy [12].

This case also illustrates that presence of a second malignancy should not lead to compromise of the treatment. Each

malignancy should be treated as it were to be if alone and with radical curative intent unless metastatic or inoperable or treatment of one would compromise the treatment of the other.

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