CASE REPORT

Bronchogenic Carcinoma Mimicking Esophageal Carcinoma – A Case Report

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Abstract:

A prisoner who was clinically diagnosed and treated as esophageal carcinoma with help of Endoscopy and CT. It was found to have bronchogenic carcinoma with multiple metastasis and infiltration to surrounding structures likehilar lymph nodes, pericardium, lungs, liver and suprarenalby autopsy.

Keywords: Bronchogenic Carcinoma, Esophageal Carcinoma, Metastasis

Introduction:

Esophageal carcinomas are most common malignancies causing dysphasia which are diagnosed by endoscopic biopsies and treated in routine course. But bronchogenic carcinoma presenting as dysphasia and misdiagnosed endoscopically and radiologically is a rare entity and the mystery is opened by autopsy.

Case Report:

A 52 year-old male prisoner presenting with chest pain, breathlessness and productive cough for one month duration, diagnosed as carcinoma esophagus two months back and received radiotherapy in Kidwai Institute of Oncology, Bangalore. Carcinoma esophagus with post radiotherapy severe anemia in failure was the final diagnosis in this Institute.

His hematological investigation showed mild leucocytosis, liver function showed mild jaundice, ECG and Echo were showing sinus tachycardia. Endoscopy revealed cauliflower like growth in the lower esophagus with bleeding on touch. Biopsy revealed moderately differentiated squamous cell carcinoma. Dissection revealed bronchogenic carcinoma which was infiltrating adjoining esophagus, heart, hilar lymph nodes, lungs and liver (Fig.1). The organs were dissected and processed. CT chest (Fig. 2) showed lower 1/3 esophagus malignancy with perforation of esophagus with communication to left lung, pneumomediastinum, hemomediastinum with bilateral lung metastasis and pneumopericardium. Patient died in hospital and a medicolegal autopsy was conducted. All thoracic and abdominal organs were sent for study. Lungs, esophagus, trachea and aorta were sent in block. The heart with pericardium and lungs with bronchi were adherent. The pericardium was showing granular material with adherent trachea.

Microscopy:

Multiple sections revealed bronchogenic carcinoma (Squamous Cell Carcinoma) arising from bronchial sub mucosal glands (Fig. 3), metastasis in lungs (Fig. 4), pericardium (Fig. 5 and 6), liver (Fig. 7), infiltrating adjoining esophagus(Fig. 8 and 9) and suprarenal (Fig. 10).

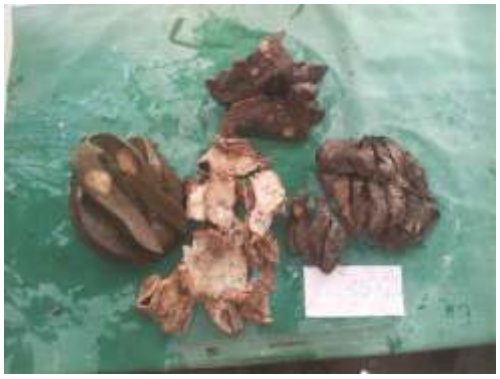

Fig.1: Dissection shows Bronchogenic Carcinoma Metastastising both of Lungs, Liver, Pericardium and Esophagus

Fig. 2: CT of Thorax Showing Bronchogenic Carcinoma Metastastising Both of Lungs, Liver

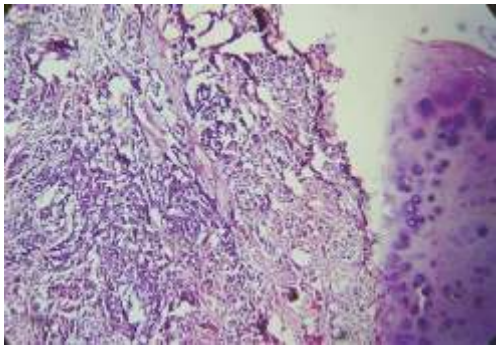

Fig. 3: Microscopy showing Bronchogenic Carcinoma arising from Tracheal Submucosal Glands

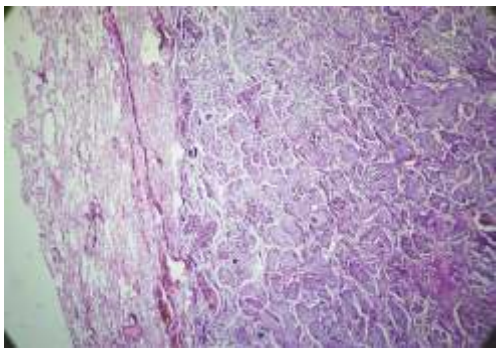

Fig. 4: Microscopy showing Bronchogenic Carcinoma Metastastising Lungs

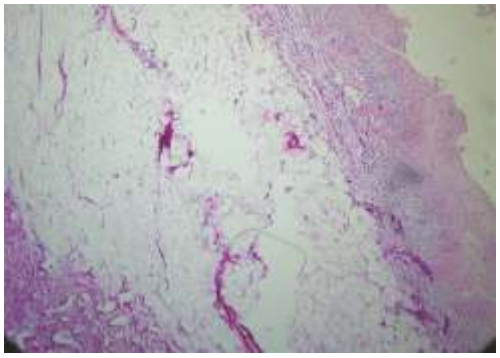

Fig.5: Microscopy showing Bronchogenic Carcinoma Infiltrating Pericardium (4x)

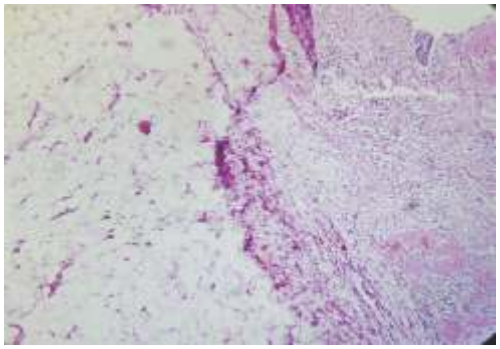

Fig. 6: Microscopy showing Bronchogenic Carcinoma Infiltrating Pericardium (10x)

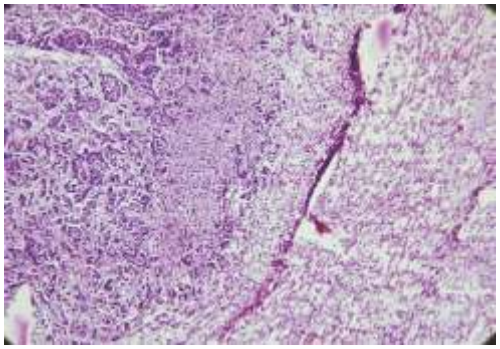

Fig. 7: Microscopy showing Bronchogenic Carcinoma Metastastising Liver

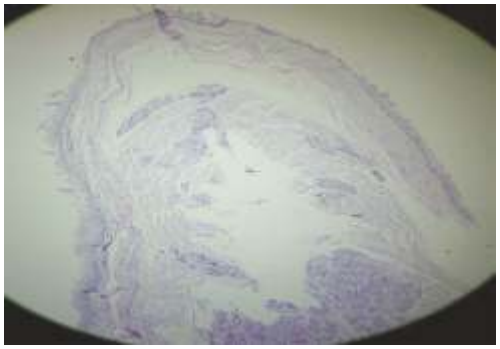

Fig. 9: Microscopy showing Bronchogenic Carcinoma Infiltrating Esophagus from the Serosal Layer with Intact Esophageal Mucosa

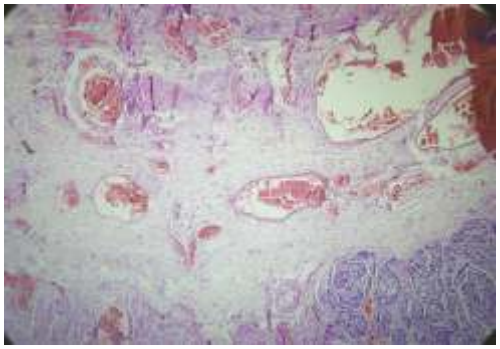

Fig. 8: Microscopy showing Bronchogenic Carcinoma Infiltrating Esophagus with Fistula

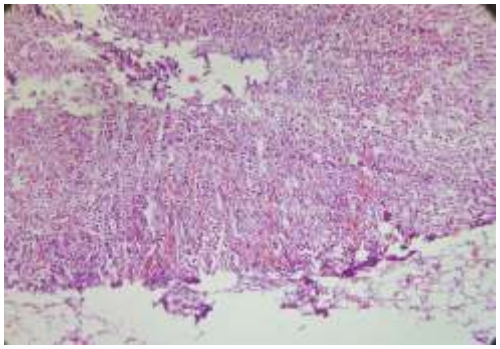

Fig.10: Microscopy showing Bronchogenic Carcinoma Metastastising the Adrenals

Discussion:

Esophageal squamous cell carcinoma is commonly diagnosed by endoscopy and treated accordingly. But bronchogenic carcinoma (Squamous Cell Carcinoma) with multiple metastatic deposits in various organs presenting as esophageal malignancy is rarest entity and difficult to diagnose and treat clinically, as in my case in spite of all modern techniques. This case is presented because of its rarity and such reports are not available in literature. Squamous Cell Carcinoma (SCC) is a malignant epithelial tumor showing keratinization and/or intercellular bridges that arisefrom bronchial epithelium (Epidermoid Carcinoma). Over 90% of squamous cell carcinoma of lung occurs in cigarette smokers [1]. Arsenic is also strongly associated with squamous cell carcinoma. The majority of squamous cell lung carcinomas arise centrally in the mediastinum, lobar or segmental bronchi [2]. Tumours are usually white or gray and depending on the severity of fibrosis, firm with focal carbon pigment deposits in the centre and star –like retractions in the periphery. The tumour may grow to a large size and may cavitate. Central tumours

form intraluminal polypoid masses and / or infiltrate through the bronchial wall into surrounding tissue and may occlude the bronchial lumen resulting in stasis of bronchial secretions, atelectasis, bronchial dilatations, obstructive lipoid pneumonia and infective broncho-pneumonia. A minority of cases may arise in small peripheral airways. This may be changing since a recent study reported 53% of squamous cell carcinoma to be present in the peripheral lung [3].

Central squamous cell carcinoma is characterized by two major patterns of spread: intraepithelial spread with or without sub epithelial invasion and endobronchial polypoid growth [4, 5]. Extensive intraepithelial spreading is common in major bronchi and the epithelia of bronchial glands or ducts may often be involved. Two patterns of early invasive squamous cell carcinoma have been described. One grows laterally along the bronchial mucosa replacing surface epithelium with sub mucosalmicro invasion and involvement of the glandular ducts (creeping type): the other appears as small polypoid mucosal lesions with downward invasion [6] (Penetrating type). Direct involvement of hilar mediastinal tissue including lymph nodes may be encountered in advanced cases. Peripheral squamous cell carcinoma characteristically forms a solid nodule, commonly with intrabronchiolar nodular growth, intraepithelial extension or both [3]. In advanced cases peripheral squamous cell carcinoma may involve the chest wall or diaphragm directly through pleura. Staging is usually performed according to the TNM system [7, 8]. In general, squamous cell carcinoma tends to be locally aggressive involving adjacent structures by direct contiguity. Metastasis to distant organs is much less frequent than in adenocarcinoma or other histological types of primary lung cancer [9]. For peripheral tumours less than 2cm in diameter, regional lymph node metastasis is exceptional [10]. Tumours with poorly differentiated histology may metastasize early in their clinical course to organs such as the brain, liver, adrenals, lower gastrointestinal tract and lymph nodes. Local regional recurrence after surgical resection is more common in squamous cell carcinoma than in other cell types [11].

Conclusion:

Bronchogenic carcinoma (Squamous Cell Carcinoma) with multiple metastatic deposits in various organs presenting as esophageal malignancy is rare entity.

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