

## Bronchial Carcinoid: Ten Years Experience

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*Key words: Bronchial, Carcinoid, Experience, ten, years.*

ISSN: 2070-254X

### Background

Broncho-pulmonary carcinoid is a low grade malignant tumor. These tumors are reported to represent 10% of all carcinoid tumors and 1-6% of all lung tumors. Eighty to 90% of tumors develop within a bronchus of subsegmental size or greater , while 10-15% arise in a mainstem bronchus . This work was conducted to study bronchial carcinoid tumor regarding age and sex distribution, incidence rate, surgical techniques and patients' survival.

### Patients and Methods

Between 1998- 2008, 31 patients with broncho-pulmonary carcinoid were included . Evaluation of the patients included, full history taking, full clinical examination, C.T scan of the chest and upper abdomen and fiber optic bronchoscopy. Pulmonary function tests were ordered for all patients . Bronchoscopic biopsy was obtained in 21 patients, transthoracic needle biopsy in 5 and the diagnosis was reached postoperatively in the remaining 3 patients.

### Results

Among the studied patients, there were 13 males and 16 females , the mean age was 33 years , all male patients were smokers and none of female patients ever smoked.

Twenty five patients were symptomatic, the tumor was discovered accidentally in the remaining 6 patients . Bronchial carcinoid represented 22.4% of all carcinoid tumors and 8.2 % of lung cancer patients referred to our institution during this period. Carcinoid syndrome was found in only one of our studied patients.

Operative procedures performed were; lobectomy in 8 (5 Lt. and 3 Rt.), bi-lobectomy in 2, pneumonectomy in 3 (2 Rt. And 1 Lt. ) and 18 sleeve resections (sleeve lobectomy in 15, sleeve Rt pneumonectomy in 2 and one with bronchial resection and re anastomosis ).

Postoperative pathology revealed 29 patients with typical and 2 with atypical carcinoid. The mean tumor size was 2 X 3.5 cm with a range of 1.5 X 1.8 cm. – 3 X 4.5 cm..

Postoperative TNM staging was : 12 patients with stage IA ( T1 N0), 15 IB ( T2 N0), 2 IIA ( T1 N1, T3N0), 2 IIIA ( T2 N2).

Morbidity was encountered in 11 patients , in the form of arrhythmia in 5, pneumonia in 3 and prolonged air leak in 3 patient with no operative related mortality. Follow up data were available for 27 patients as 4 patients were lost to follow up. One patient with atypical carcinoid died 8 months postoperative from disseminated disease, the remaining 26 patients are alive disease free. Follow up duration ranged from 7 -97 months. Overall survival rate was 81.5%.

### Conclusion

Bronchial carcinoid is of low malignant potential with excellent survival following complete resection . Bronchoscopy should be done for all patients preferably by the operating surgeon.

Great effort should be carried out to resect this special type of lung tumor as surgery is considered the only line of treatment, due to low malignant potential, bronchoplastic procedures should be encouraged whenever indicated.