

CASE PRESENTATION

SUMMARY

NINE cases of glottic carcinoma and four of supraglottic carcinoma has been presented. The literature and comparative study with the global and local factors has been reviewed.

REVIEW OF LITERATURE FOR GLOTTIC CARCINOMA

The incidence of carcinoma of Larynx is 1.2 %. (W.H.O., Kerr Etal¹). It is male predominant diseases and it occurs between 50 and 70 years and the commonest site is the glottic.

The predisposing factors are :
Irradiation in Childhood.
(Goolden³), average time 25 — 30 years :

Leucoplakia and polypoid degeneration of the vocal cords.

SMOKING

Because smokers have thicker surface epithelium due to excessive keratinization of the true cords : Epithelial hyperplasia of the false, true cords and subglottic area; Squamous metaplasia; Occurance of cells with a typical nuclei which is infrequent in non smokers, these changes might proceed to carcinoma in situ and invasive carcinoma (Auerbach ET-al²).

The key to successful management of laryngeal carcinoma is early diagnosis and appropriate

Glottic and supraglottic carcinoma

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curative treatment applied when the lesion is localised.

Over 90 % of carcinoma affecting the larynx is squamous cell carcinoma and the majority are moderately differentiated. The commonest site is the glottis. The lesion may be papillary or sessile and even verrucoid, the lesion surrounded by nimbus of carcinoma in situ and illdefined border of atypism, metaplasia or both. The in situ carcinoma margin is usually of limited size. Toluidine blue stains area of atypism, carcinoma in situ and infiltrative carcinoma in differentiated fashion.

Most cases of carcinoma in situ originate on the anterior half of the vocal cord, (Miller & Fisher⁷) carcinoma in situ is nearly always in continuity with the area of squamous metaplasia, the more extensive, the intra-epithelial change is the more likely the invasive carcinoma in adjacent area. Glottic carcinoma is the most common

laryngeal carcinoma. (Altman tal⁴). The disease is male predominant. The age is distributed between 50 and 70 years of age. These patients present initially with intermittent hoarseness, which becomes constant and then progresses to dyspnoea due to fixation of the vocal cords following infiltration of the muscles, which in turn increases the incidence of lymphatic spread.

Mainly the anterior half of the vocal cords and the anterior commissure, rarely the posterior commissure primarily affected.

Once the commissure affected, submucosal extension in several directions facilitated.

Early glottic carcinoma carry the best prognosis. If the laryngeal muscles and cartilage involved the survival rate drops from 90 to 50 %.

Lymphnode involvement drops the survival rate to 20 %. Most of the glottic carcinoma are well differentiated.

TREATMENT

Carcinoma in situ :

It is agreed that the excision of the vocal cord or stripping is the ideal treatment. For invasive carcinoma there are several modalities : Radiotherapy, Surgery, Immunotherapy, Combined Radiotherapy and Surgery,

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Chemotherapy with Surgery or Radiotherapy.

In the period between May 1977 to July 1980, we have seen 9 cases of glottic carcinoma.

TABLE NO. 1

Frequency of incidence according to Nationality

Bahraini	—	9
Non Bahraini	—	0

TABLE NO. 2

Frequency of distribution according to age.

			1		
			2		
1	1	1	3	1	1
40	42	45	60	65	85

The age of one patient has not been recorded.

TABLE NO. 3

Frequency of incidence according to Sex.

Male	—	8 cases
Female	—	1 case.

TABLE NO. 4

Frequency of incidence according to the Place of Residence.

Manama	—	4 cases
Village	—	3 cases
Muharraq	—	2 cases

TABLE NO. 5

Frequency of incidence compared to smoking habits.

Smoking	—	7 cases
Non smoking	—	2 cases

TABLE NO. 6

Frequency of incidence compared with consumption of alcohol. All our cases are non alcoholic, i.e., therefore smoking and alcohol factor does not play great deal.

TABLE NO. 7

Family History

Non of the cases gave the history of cancer in very close member of the family.

TABLE NO. 8

Stagging

4 cases of T ₁ ,	N ₀ ,	M ₀
3 cases of T ₂ ,	N ₀ ,	M ₀
2 cases of T ₄ ,	N ₀ ,	M ₀

TABLE NO. 9

Treatment

Radiotherapy	—	6 patients
Surgery	—	2 patients
Combined	—	1 patient

Most patients has received chemotherapy, either in combination with Radiotherapy given in Kuwait or after surgery. Those who have received chemotherapy by our unit, usually given our regim of high dose of methotrexate followed by leucovorin.

The usual treatment used for glottic carcinoma is radiotherapy, surgery, chemotherapy, immunotherapy, cryo-surgery and combination of the above.

TABLE NO. 10

Recurrence

8 cases had no recurrence and one had recurrence, remembering

that most of our cases are extensive when they are diagnosed. There is one case of carcinoma in situ in this series where excision has been done under microscope and she is alive and well up till now.

SUPRAGLOTTIC CARCINOMA LITERATURE REVIEW

It has been observed that supraglottic carcinoma do not involve the laryngeal framework and are of bilateral or horse shoe in their distribution. The supraglottic portion of the larynx develop from the bucco pharyngeal analage, the glottic and subglottic portion develops from the tracheabronchial analage.

Obviously the extent of laryngeal and hypopharyngeal cancer is of utmost importance when one evaluate patient for supraglottic resection.

Criteria for supraglottic resection; (Kirchner & Som⁵)

1. Did not invade the cartilage.
2. Involvement of the perichondrium proclude supraglottic resection.
3. Lesion that extend below the anterior commissure. The value of pre-operative radiotherapy in these cases are unsettled.

Metastasis to lymphnode (Som⁶), is the greatest single factor in failure of supraglottic laryngectomy. Over three years period, we have seen four cases of Supraglottic Carcinoma. All of them are Bahrainis, their age range between 42 and 86, the mean age is 64, three of them are males and one is female. Two of them are Muharraq residents and one from Manama and the other village resident. Three of them are smokers, and one is alcoholic. None of them have a family history of cancer. Three patients had received radiotherapy and one had chemotherapy alone,

two of them had recurrence after treatment and the other two have no recurrence so far.

STAGING

T₂, N₀, M₀ — 1 case
 T₂, N₀, M₀ — 1 case
 T₃, N₀, M₀ — 1 case
 T₄, N₀, M₀ — 1 case

No cases of subglottic carcinoma has been seen over the last three years in Salmaniya Medical Centre.

CONCLUSION

From this study it appears that carcinoma of the larynx, and especially that of the glottis is the commonest carcinoma in E.N.T. This study is showing that smoking plays a role in the generation of carcinoma of larynx. Most of the cases we have seen are advanced when

they have presented to us, and because of their refusal of surgical treatment they present us with a difficult management problem.

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REFERENCES

1. Kerr, R.C., Madigan, J.P.? and Miller H.S. carcinoma of the larynx in Melbourns 1956-1965. Aust. N.Z.J. Surg. 40 : 19, 1970.
2. Auerbach, O., Hammond, E.C., and Carfinkel, L., Histologic changes in the larynx in relations to smoking habits. Cancer 25 : 92. 1970

3. Goolden, A.W., Radiation Cancer. Br. J. Radiol 30 : 626, 1971.
4. Altman, F., Ginsberg, I., and stout, A.P., Intreepithelial carcinoma (Cancer in situ) of the larynx. Arch. Otolaryngol. 56 : 121, 1952
5. Kirchner, J.A., and Som, M.L., Clinical and Histological observations on supraglottic Cancer Ann. Otol. Rhinol. Laryngol. 80 : 638, 1971.
6. Som, M. L. Conservative surgery for carcinoma of the Supraglottis J. Laryngol. Otol. Rhinol. Laryngol. 80 : 6, 1971.
7. Miller A.H., and Fisher, H.R., cluse to the life history of carcinoma in situ of the larynx. Laryngoscope 81 : 1475, 1971.

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