

Malignancies of the Head and Neck in Bahrain

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ABSTRACT

A prospective study of carcinoma of the head and neck was carried out between May 1977 and June 1980. The main aim of the study was to establish the prevalence of carcinoma in each site and to study the factors involved when possible.

We diagnosed 9 cases of glottic carcinoma, 4 cases of supraglottic carcinoma, 3 cases of carcinoma of the maxillary antrum, 4 cases of basal cell carcinoma of the nose, 2 cases of post-nasal carcinoma, 6 cases of oral and oropharyngeal carcinoma, 6 cases of post-cricoid carcinoma, 4 cases of thyroid carcinoma and 2 cases of oesophageal carcinoma.

No cases of subglottic carcinoma, pyriform fossa carcinoma and pharyngeal wall carcinoma were seen. A high incidence of post-cricoid carcinoma could be explained by the prevalence of hypochromic anaemia in this community. Smoking has been found to be a major factor in glottic carcinoma. In our series, alcohol is not a major factor in oropharyngeal and hypopharyngeal carcinoma. Tobacco and pan-leaf chewing have not been found as a causal factor of oral carcinoma. Carcinoma of the post-nasal space was found to have a low incidence in this community compared to China and South East Asia.

Fair skin and exposure to sunlight is a factor in developing carcinoma of the face. Surgery is frowned upon by many of our patients because of the fear of mutilation and the old belief that people with a deformity or handicap would be resurrected as such.

Malignancies of the head and neck are not uncommon and diagnosis is not difficult. Each site in the head and neck has special features, with special geographic distribution and predisposing factors.

As there is no cancer registry in Bahrain, the study has been designed as a prospective study to examine the incidence of carcinoma of the head and neck in each site and the factors involved. The study was originally designed for 5 years (May 1977-June 1982) but due to unforeseen circumstances the study was terminated after a 3 year period.

METHODS

A prospective study of carcinoma of the head and neck was designed starting from May 1977, each patient seen in the E.N.T. department of the hospital, and diagnosed as carcinoma was included. A special questionnaire was completed for each patient. Details covered were; age, residence, the history, predisposing factors (family history of cancer, irradiation in childhood, nutritional habits, smoking, alcohol consumption, mouth and dental hygiene, anaemia, oesophagitis, fibrous stricture, achalasia of the cardia), associated diseases, the type and site of the lesion, histology and differentiation, extension, nodal involvement and distant metastasis. Staging was then done according to UICC¹, type of treatment received, radiotherapy, chemotherapy, surgery or combination and recurrence.

The data collected was examined and analysed after three years.

RESULTS

The results have been classified according to the site affected.

Glottic Carcinoma

Nine cases of glottic carcinoma were diagnosed, all were Bahrainis. Their ages were between 40 and 85 years. Eight were males. Seven were smokers and none consumed alcohol. None had a family history of cancer. There was no significant geographic distribution, four were staged as T₁, N₀, M₀, three as T₂, N₀, M₀, two as T₄, N₀, M₀. Most of the patients

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refused surgery. Most were treated with radiotherapy, except two, one case involved stripping of the cord for carcinoma in situ and the other case had partial laryngectomy. One patient received combined radiotherapy and chemotherapy.

Supraglottic Carcinoma

Four cases of supraglottic carcinoma were diagnosed, all were Bahrainis. Their ages were between 42 and 86 years. Three were males and one was female. Three were smokers and one consumed alcohol. None had a family history of cancer. There was no significant geographic distribution, they were staged as T₂, T₂, T₃, T₄, with N₀ and M₀. Three patients received radiotherapy and one had chemotherapy. Two had a recurrence after treatment. No cases of subglottic carcinoma were seen.

Carcinoma of the Maxillary Antrum

Three cases of carcinoma of the maxillary antrum were diagnosed, all were Bahrainis. Their ages were between 48 and 80 years. One was male and two were females. One was a smoker and none consumed alcohol. None had a family history of cancer. All received radiotherapy and one received additional chemotherapy. None agreed to surgical excision. One patient died during treatment, all had a history of chronic sinusitis.

Basal Cell Carcinoma

Four cases of basal cell carcinoma were diagnosed, two were Europeans and two were Bahrainis. Their ages were between 35 and 76 years. All were of fair skin. Three were males and one was female. Their professions were blacksmith, farmer, manager and housewife. One had syphilitic infection. All had surgical excision. Only one patient had a recurrence after eighteen months.

Post-nasal Carcinoma

Two cases of post-nasal carcinoma were diagnosed, both were Bahrainis. Their ages were between 40 and 50 years. Both were males. Both were smokers and neither consumed alcohol. Neither had a family history of cancer. The first case had involvement of the lateral wall staged as T₁, with N₀

and M₀. The second case had involvement of the posterior wall of the nasopharynx, posterior pillar of the right tonsil and right fossa of rosenmullar staged as T₄ with N₀ and M₀. Both patients received radiotherapy and chemotherapy. One had a recurrence and the other was free of disease after 3 years.

Oral and Oropharyngeal Carcinoma

Six cases of oral and oropharyngeal carcinoma were diagnosed, five were Bahrainis. One case which had carcinoma of the tongue was non-Bahraini. Their ages were between 38 and 70 years. All were males. Two were smokers and none consumed alcohol. None chewed tobacco or pan-leaves. None had a family history of cancer. Two cases involved the vallecula staged as T₁, N₀, M₀, and T₂, N₀, M₀, one involved the buccal mucosa staged as T₄, N₀, M₀, one involved the floor of the mouth staged as T₄, N_{2B}, M₀ and two cases of carcinoma of the tongue were staged as T₂, N₀, M₀ and T₃, N₀, M₀. The patient with carcinoma of the floor of the mouth had bad dental and oral hygiene. All refused surgery and all received radiotherapy, except the patient with carcinoma of the floor of the mouth. Two had a recurrence in the period of 3 years.

Carcinoma of the Post-cricoid

Six cases of carcinoma of the post-cricoid were diagnosed, five were Bahrainis. Their ages were between 36 and 80 years. One was a male and five were females. Only one was a smoker and none consumed alcohol. One gave a positive family history of cancer.

Three cases were staged as T₂ with N₁ and M₀, two cases as T₃ with N₁ and M₀, and one case as T₃ with N₀ and M₀. None agreed to have surgical treatment. All received radiotherapy and three received chemotherapy (Methotrexate followed by Leucovorin). Two cases had a recurrence after six months of treatment and both died of disseminated disease the others disappeared for follow-up. No case of posterior pharyngeal wall and pyriform fossa carcinoma was seen.

Carcinoma of the Thyroid

Four cases of carcinoma of the thyroid were diagnosed, all were Bahrainis. Their ages were between 32 and 55 years. Three were males and one was female. None had a family history of cancer or irradiation during childhood. Three were papillary carcinoma and one undifferentiated carcinoma. Two cases had surgical excision and the other two had radiotherapy as they were far advanced at the time of presentation.

Carcinoma of the Oesophagus

Two cases of carcinoma of the oesophagus were diagnosed, both were Bahrainis. Their ages were between 50 and 70 years. One was male and one was female. Neither was a smoker and neither consumed alcohol. Neither had a family history of cancer. One case was classified as intrathoracic oesophageal lesion T₁, the other was in the lower oesophagus and, because the oesophagoscope could not pass the lesion, it has been assumed as T₂. One received radiotherapy and the other received a combination of radiotherapy and chemotherapy. The patient with T₂ had a recurrence after six months. The other was disease free.

DISCUSSION

In this study it is shown that glottic, oral, oropharyngeal and post-cricoid carcinoma are the most common malignancies of the head and neck: By far the most common malignancy in this study is glottic carcinoma. This is in accordance with other studies^{2,3}. In glottic carcinoma smoking seems to play a role in the development of carcinoma through squamous metaplasia⁴. In our study alcohol does not play a role in the development of cancer. Most of our cases were far advanced when seen except those of glottic malignancy.

From this study we can see that most of our patients refused surgery, their refusals were based either on old myths or fear of mutilation. However, this attitude is not conducive for building expertise in this kind of surgery and, after all, optimum cure could not always be achieved with a single modality.

This study also shows that basal cell carcinoma and squamous carcinoma of the face are not common malignancies, although the amount of ultra-violet radiation in Bahrain is far greater than that of any European country⁵. Also carcinoma of the paranasal sinuses were not found to be common.

This study reflects the rare incidence of nasopharyngeal carcinoma in Bahrain compared to a much higher incidence in China and South East Asia⁶.

It has been reported that bad oral hygiene and leukoplakia play a role in the development of carcinoma^{7,8,9} as was found in one of our patients. We have seen from the study that post-cricoid carcinoma is a common malignancy. We know that Bahrain is heavily infested with anaemia but we have no frank evidence of Paterson-Brown-Kelly syndrome¹⁰. No cases were recorded in the study of sub-glottic carcinoma and posterior pharyngeal wall carcinoma.

CONCLUSION

From the study we conclude that glottic, oral, oropharyngeal and post-cricoid carcinoma are the most common malignancies in Bahrain.

Lack of health education and some old myths contributed to the great number of patients' rejections to surgery. The number of patients quoted in the study does not support establishment of a cancer surgical centre in Bahrain. However, it would be wise to think of establishing 3 centres for the whole Arabian Gulf Region, as centres of par excellence for surgery of the head and neck.

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