CANCER IN GENERAL PRACTICE

RONALD W. RAVEN
AND
P. E. THOMPSON HANCOCK

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CANCER
IN
GENERAL PRACTICE

by

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FOREWORD

ALTHOUGH the general practitioner usually relies upon his specialist colleague to exploit both of the two remedies for the control or "cure" of cancer—surgery and irradiation—his function in regard to the disease is really paramount. This function is early diagnosis. If the patient's life is to be saved a cancer must be detected whilst the disease is still localized, for at present we have no remedy of a practical kind which can influence cancer once it has become disseminate. Even when, as is probable, some form of chemotherapy is found which does not kill the patient in the process of controlling the disease, the early diagnosis will still be imperative.

Cancer is such a common disease after the age of 40 years that in examining every patient past this age cancer must always be in the doctor's mind—though the word should rarely be on his lips. The symptoms and signs of early cancer are not "specific"; they are symptoms and signs of dysfunction of the affected organs and they are therefore not dissimilar from those found in conditions more common but much less serious. Let us take two examples. An ill-defined dyspepsia may conceal an early cancer of the stomach; a patch of "localized catarrh" remaining after influenza may owe its existence to an early bronchial carcinoma. Whenever, therefore, disease processes like these do not pursue a natural course, or do not yield to appropriate remedies cancer must always be suspected. The onus at once becomes this—to prove that the lesion is *not* cancerous. A spirit of unrest must activate the doctor's mind until he has eliminated the possibility of early malignant disease. In many cases there is a reasonable margin of time between the local and potentially curable stage of cancer and the generalized and incurable stage. It is this margin which offers a fertile field for the doctor's skill. The reward for such skill may be the saving of the life of a fellow human being.

It is considerations like these which led Messrs. Butterworth to undertake the publication of "Cancer in General Practice". The pooled experience, both medical and surgical, of the joint authors is so wide and deep that the reader may be assured of the appositeness and authenticity of the text. He will find the answers to many pertinent questions relating to cancer clearly and soundly set out. The book should advance notably the successful treatment of what is admittedly the most formidable problem in Medicine today.

October, 1952 HORDER

PREFACE

THE CONTROL of cancer is one of our most important problems on account of the heavy annual death rate from the disease and the great amount of suffering and anxiety which it causes. The problem presents three main aspects, namely, precautions to be taken for prevention, research into the cause, and the consideration of the early diagnosis and treatment. It is obvious that the best hope of cure for a patient with cancer is the institution of effective treatment during the early stages of its development. Many patients have lived to old age without recurrence because of this early intervention.

The subject of the education of the public concerning certain aspects of cancer, especially the early warning symptoms of the disease, is receiving careful consideration and several schemes are working with this in view in different parts of the country. Similar education has been valuable in the control of other diseases, notably tuberculosis, and if the subject is presented with care, it is felt that the same benefits will be achieved with cancer. People are being urged to consult a doctor as soon as symptoms are noticed which may mean cancer and therefore it is logical for them to be made aware of the danger signals, since some of them do not impress the layman that they are at all serious.

In this book the authors seek to present to their colleagues in general practice certain aspects of the disease, especially in connexion with the early diagnosis, which will help them in their work. Information is also given about the developing lesion and its spread. A detailed account of the treatment in each part of the body is purposely omitted but a broad outline is presented together with a note on the prognosis. It was felt that the association of a surgeon and physician would be advantageous in preparing the text so that a joint view-point could be presented. We trust that our colleagues in general practice may find the book useful to them and it may also help medical students and nurses.

We are greatly indebted to Lord Horder for kindly writing the Foreword; his constant interest in cancer has been evinced throughout his professional life. We thank Miss J. Hunt and Dr. P. Hansell of the photographic departments of the Royal Cancer Hospital and Westminster Hospital respectively for help with the photographs; Miss Joan Gough-Thomas, for kindly prepairing the Index; and Messrs. Butterworth & Co. (Publishers) Ltd. for their kind co-operation in the publication of the book.

RONALD W. RAVEN

London, 1952 P. E. THOMPSON HANCOCK

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CHAPTER 1

THE MOUTH

CANCER of the mouth contributes about 3 per cent to the total number of deaths from cancer each year in this country. The most common site to be affected is the tongue, followed by the floor, buccal aspect of the cheek, alveolar margin and the lip.

CARCINOMA OF THE TONGUE

In the past this disease was associated with a poor prognosis and many years ago Butlin was impressed with its seriousness and endeavoured to find an answer to the problem. He wrote "the future of operative surgery of carcinoma of the tongue undoubtedly lies in early diagnosis and in the routine removal of glands before they are obviously enlarged". Since his day treatment has advanced and irradiation techniques have been introduced and therefore the outlook for the patient is more favourable.

The pre-cancerous lesion

The importance of recognizing this condition is obvious and attention is called to certain varieties of pre-cancerous lesions which require careful management if malignant changes are to be avoided.

Dental ulcer.—It is not unusual to find this condition associated with a sharp tooth or a poorly fitting denture causing trauma to the tongue. The ulcer has a very indurated edge which renders differentiation from carcinoma somewhat difficult apart from biopsy and histological examination. The source of trauma must be removed and the mouth be kept clean by the frequent use of mild mouth-washes. When it does not heal in the period of two weeks following the removal of the cause, it should be excised and examined histologically.

Leucoplakia.—This is regarded as a pre-cancerous condition and the patients are kept under periodic observation (*see* Fig. 1). Any obvious cause is removed, including carious and septic teeth and other forms of infection; the excessive use of tobacco and alcohol is stopped, and if syphilis is present it is treated.

If there is any area in the tongue which shows suspicious signs of malignancy a biopsy and microscopical examination must be carried out. Sometimes a carcinoma develops at the bottom of a crack or fissure which is found in tongues affected by leucoplakia.

Benign tumour.—The most common benign tumour of the tongue is a papilloma which may undergo malignant changes. It should therefore be carefully excised.

Description of the early lesion

Often a small swelling develops in the tongue which resembles a pimple, wart, blister or a plaque. In many patients the disease commences as a small indurated ulcer which progressively enlarges. More uncommon early manifestations are the development of a depression in the tongue, or a hardening of the organ. The following types can be distinguished.

The malignant ulcer.—This is the most common variety; it develops in the lateral border at the junction of the anterior two-thirds and posterior third, in the inferior surface or in the dorsum (Fig. 2). The edge is everted and indurated, the base is unhealthy with all the appearances of a destructive ulcerative process. It spreads into the substance of the tongue and contiguous structures.

The papilliferous tumour.—Initially there is a small swelling in the substance of the tongue which is covered with intact mucous membrane. It increases in size, develops papilliferous processes and may reach a large size. The tumour may develop in any part of the tongue but more frequently it involves the dorsum or inferior aspects. Sometimes there are multiple tumours present which are separated by apparently healthy tissue. Later, the mucous membrane covering the tumour may become ulcerated.

The plaque carcinoma.—A flat plaque of growth appears to be stuck on the surface of the dorsum of the tongue, with smooth mucous membrane covering it which is devoid of papillae. The tissues surrounding the plaque are indurated.

Carcinoma developing in a fissure.—A carcinoma may develop at the bottom of a fissure; the edges of the cleft become indurated and a hard mass is felt in the substance of the tongue. Whenever a deep fissure is present in the tongue, the bottom should be examined for the presence of a malignant lesion.

Diffuse carcinoma.—The whole of the substance of the tongue is involved in the malignant process so that the organ becomes uniformly hard and may be contracted in size. There is much fibrosis present and the movements of the tongue are impaired.

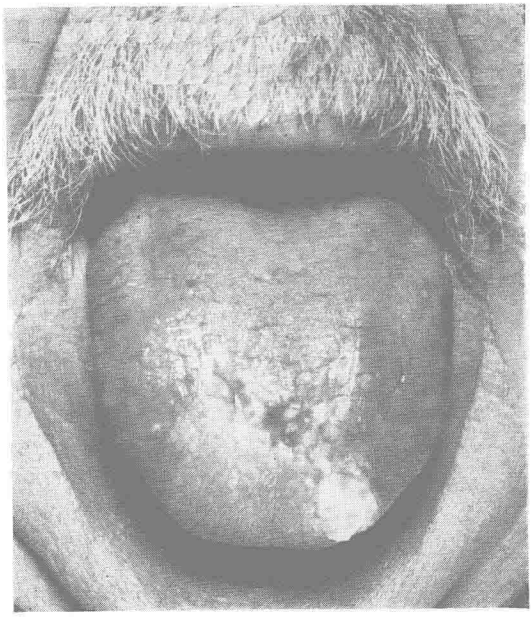

FIG. 1.—Leucoplakia of the tongue. Clinical photograph showing the typical smooth white areas on the dorsum.

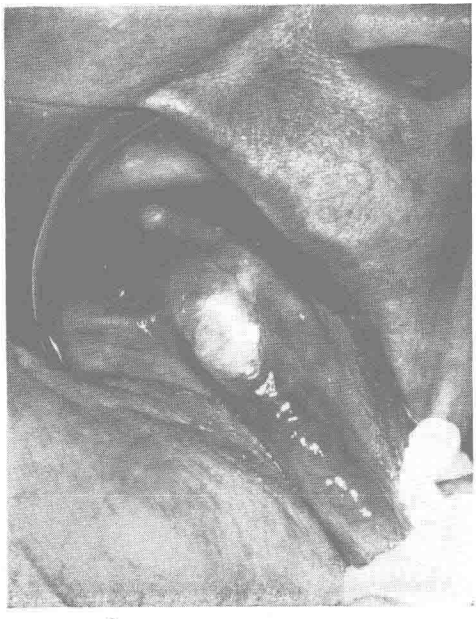

FIG. 2.—Carcinoma of the tongue. Clinical photograph showing the ulcer on the lateral border at the junction of the posterior third and anterior two-thirds.

Multiple carcinomas.—Occasionally multiple malignant lesions are found in the tongue and gradually develop into one large carcinoma.

Development of the disease

Spread by direct extension.—The disease spreads from the tongue to adjacent structures in the mouth. Anteriorly the floor and alveolus become involved, whilst posteriorly the disease spreads to the pillars of the fauces, tonsil and posterior pharyngeal wall.

Spread by the lymphatics.—Carcinoma of the tip of the tongue gives rise to metastases in the submental group of lymph nodes. A neoplasm situated in the anterior two-thirds of the tongue, excluding the tip, gives rise to metastases in the submaxillary lymph nodes. A neoplasm situated in the posterior third of the tongue gives rise to metastases in the deep cervical group, which also drain the submaxillary and submental groups. Some of these nodes are found in the posterior triangle of the neck. The lymphatic drainage of the tongue is very rich and it is important to remember that spread may occur to the opposite side of the neck when the neoplasm is situated in one border of the tongue. Metastases may be present in the regional lymph nodes which cannot be felt clinically. It is not possible to state at what period in the development of the disease spread occurs to the regional lymph nodes; metastases may be present when symptoms have been noticed for only 2 months.

Spread by the blood vessels.—This is uncommon; when it does occur metastases are found in the usual sites including the lungs and liver.

Spread by implantation.—Sometimes a second carcinoma is found in the oesophagus and it is thought possible that a small portion of the growth from the tongue has become implanted in its wall.

Early symptoms and signs

The earliest symptom noticed by the patient is often the presence of a lump or ulcer in the tongue. When the latter type of neoplasm occurs pain may be experienced which is intermittent at first and made worse by hot food or alcohol.

Later the pain is constant, boring in character and radiates to the lower jaw. Referred pain is also noticed in the ear on the side of the lesion. The mobility of the tongue becomes impaired and on protrusion it deviates to the affected side. The various types of carcinoma seen on examination have been described.

In the later phases of the disease a number of other symptoms occur. These include excessive salivation and haemorrhage from an ulcer. In some patients marked oedema occurs in the tongue and there is trismus. Loss of sensation of taste occurs and there is severe foetor oris.

Enlargement of the regional lymph nodes may be noticed by the patient and a lump in the neck may cause him to seek medical advice. Later the lymph nodes become fixed in the neck and ulceration of the overlying skin occurs. It is noticeable in patients with carcinoma of the tongue that there is often a severe degree of oral sepsis and caries of the teeth present. The Wassermann test should always be carried out in these patients.

Treatment of the tongue

Before active treatment of the carcinoma is commenced oral sepsis is controlled and carious teeth removed. When the carcinoma is small and situated in the anterior part of the tongue a partial glossectomy is indicated. In patients with more advanced lesions, especially when situated in the posterior part of the tongue, irradiation should be carried out. Teleradium therapy is given for carcinoma in the posterior third; for other types of neoplasm interstitial irradiation with radium needles is carried out.

If the primary growth cannot be controlled with irradiation techniques or there is a recurrence, a total glossectomy should be considered providing the patient's general condition is satisfactory.

Treatment of the neck

When the primary growth has been dealt with, attention is given to the treatment of the regional lymph nodes. If the cervical lymph nodes are not palpably enlarged a limited block dissection on the side of the lesion is carried out removing the lymph nodes down to the omohyoid muscle. When the lymph nodes are enlarged a complete block dissection of the neck is carried out on the side of the lesion.

In patients where the primary growth is placed centrally in the tongue, or the median raphé is penetrated the lymph nodes on both sides of the neck must be dealt with in the above way, in one or two stages depending on the general condition of the patient. Both internal jugular veins may be excised at the same operation.

Unfortunately patients are seen who have fixed lymph nodes in the neck, or even with ulceration and fungation through the

skin. A course of palliative irradiation may bring about some amelioration.

General treatment

The general treatment of the patient is important: nutrition must be maintained at its optimum, anaemia corrected, sleep ensured, and analgesics for pain may be required.

End-results of treatment

The stage to which the disease has developed when treatment is given profoundly affects the end-results. When adequate surgical treatment is carried out for an early localized carcinoma of the tongue before metastases have occurred in the regional lymph nodes, the end-results are good. For more advanced local lesions when the lymph nodes are also involved, combined irradiation and surgical treatment gives fair end-results depending upon the extent of cervical metastases. In certain individual cases the results are gratifying. When all cases treated by the usual methods are considered, irrespective of the stage of the disease, the 5-year survival rate is about 25 per cent.

Carcinoma of the Floor of the Mouth

This form of malignant disease is second in frequency after the tongue when the mouth is concerned. In a number of patients areas of leucoplakia are found which involve the mucous membrane of various parts of the mouth and there may be a history of syphilis with a positive Wassermann reaction. The early lesion presents in a number of ways.

Description of the early lesion

The malignant ulcer.—This is the most common variety and it possesses all the characteristic features of a carcinomatous ulcer (Fig. 3). It may arise around the frenum linguae or at the orifice of Wharton's duct. Sometimes in the latter situation it may be confused with benign ulceration associated with a calculus in the orifice of the duct.

The papilliferous tumour.—A nodule develops initially in the floor of the mouth which is covered with intact mucous membrane. This gradually increases in size and papilliferous processes are developed with induration around the base. The surface of the tumour sometimes becomes ulcerated.

Diffuse carcinoma.—Occasionally the whole of the floor of the mouth is diffusely infiltrated by a malignant neoplasm with

little, or no, surface ulceration. The tissues feel hard and unyielding to touch.

Development of the disease

Spread by direct extension.—The carcinoma spreads in the floor of the mouth in all directions. Adjacent structures are soon involved; these include the under aspect of the tongue, the alveolus, the fauces and tonsil, and the lip.

Spread by the lymphatics.—Metastases occur initially in the submental and submaxillary groups of lymph nodes, the latter being affected on one or both sides, depending upon the position

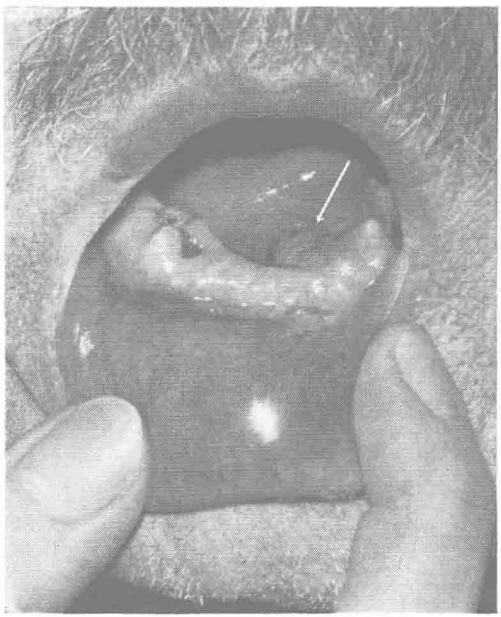

FIG. 3. — Carcinoma of the floor of the mouth and mandible. Clinical photograph showing the ulcerating lesion on the left side in a man aged 86 years. The primary growth and regional lymph nodes were successfully removed by operation. The ulcer is indicated.

of the primary growth. Later the cervical lymph nodes are involved in metastases as in carcinoma of the tongue. In rare cases the pre-auricular lymph nodes may be affected.

Spread by the blood vessels.—Very occasionally haematogenous metastases are found in the lungs or liver.

Early symptoms and signs

The earliest condition noticed by the patient may be the presence of a small swelling or area of hardness in the floor of

the mouth. There may be localized or referred pain. Another early manifestation is the development of a small ulcer which gradually enlarges and shows no evidence of healing.

Later symptoms and signs include difficulty in speaking and swallowing, loosening of teeth, and the appearance of a swelling in the neck due to metastases in the cervical lymph nodes.

Treatment

This is considered as for the tongue.

Treatment of the mouth.—The usual method is by teleradium or high voltage x-irradiation. In certain patients additional irradiation with interstitial radium needles may be required.

Treatment of the neck.—When the primary lesion is controlled, the regional lymph nodes are dealt with. When these are not palpable, a limited block dissection is carried out including the submental, submaxillary on both sides and the upper deep cervical groups on both sides. If the lymph nodes are palpable a radical block dissection is required.

End-results of treatment

These are very similar to the results achieved in carcinoma of the tongue.

Carcinoma of the Roof of the Mouth

Carcinoma may affect either the hard or soft palate. In these patients areas of leucoplakia are commonly seen in various parts of the mouth, which may be syphilitic in origin.

Description of the early lesion

The malignant ulcer.—This is a common form of the disease and the ulcer possesses the characteristic features of an epithelioma.

The papilliferous tumour.—A nodular swelling appears in the palate which steadily increases in size and papilliferous processes are developed. The base of the tumour is indurated and the surface may become ulcerated.

Development of the disease

Spread by direct extension.—Lateral spread occurs in the palate, and contiguous structures are involved including the alveolus and the pillars of the fauces and tonsil. The palate may be perforated and the interior of the antrum of Highmore is implicated.