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Main Article

Outcomes for patients referred urgently with suspected head and neck cancer

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Abstract

Introduction: The 1998 National Health Service White Paper stated that anyone suspected of having a cancer would be seen by a specialist within two weeks. The 'trigger symptoms' prompting such referral have been nationally agreed by the National Institute for Health and Clinical Excellence. This study aimed to quantify the diagnostic yield of urgent referrals for suspected head and neck malignancy, and to identify reasons why patients ultimately diagnosed with malignancy may not have been referred via this pathway.

Materials and methods: All patients referred to the trust with suspected head and neck malignancy in 2005 were included in the study. Data were obtained on date of referral, date of appointment, reason for referral and which National Institute for Health and Clinical Excellence guideline heading the referral fell under, clinical findings, and final diagnosis. Concurrently, all patients in the trust with a histological diagnosis of head and neck malignancy were identified using the computer records of the pathology department.

Results: One hundred and seventy-seven patients were referred with suspected head and neck malignancy over the one-year study period. Of these, 169 were seen within two weeks. The commonest causes of referral were hoarseness and neck lumps. Of these patients, 22 (12 per cent) were ultimately diagnosed with malignancy. During the one-year study period, 39 patients were diagnosed hospital-wide with head and neck malignancy, 17 of whom had not been referred via the urgent referral pathway. No unifying theme was identified to explain why these patients had not been referred via this pathway.

Conclusion: In a group of patients with symptoms suggestive of head and neck malignancy, only 12 per cent were ultimately diagnosed with cancer. Of all the patients within the trust diagnosed with head and neck cancer, 44 per cent had come from outside the urgent referral pathway.

Key words: Head and Neck Neoplasms; Referral and Consultation; Guidelines; Outpatients

Introduction

The UK Department of Health White Paper entitled *The New NHS: Modern, Dependable* promised that anyone suspected of having a cancer would be seen by a specialist within two weeks.[1] The first clinical guidelines resulting from this White Paper aimed to identify patients with symptoms suggestive of a high possibility of malignancy, therefore prompting rapid primary care referral to a hospital specialist.[2] This list of symptoms has subsequently been expanded, and the most recent guidance has been issued under the auspices of the National Institute for Health and Clinical Excellence (known as the National Institute for Clinical Excellence (NICE) at the time of the study).[3] These 'trigger' symptoms are shown in Table I.

The current study was prompted by the anecdotal finding that, although many patients were being referred under the two-week guidelines, many of these did not have malignancy; conversely, many of the patients in whom malignancy was identified had been referred via other channels. We therefore aimed to quantify the diagnostic yield of urgent referrals for suspected head and neck malignancy, and to identify reasons why patients ultimately diagnosed with malignancy had not been referred via this pathway. Similar studies have assessed the referral of head and neck malignancy to maxillofacial surgeons.[4,5] We conducted a literature search using the same medical subject heading keywords as cited for this paper, plus the more specific phrases 'two week wait' and 'urgent referral'. To our knowledge, the current study is the first such audit of patients referred to an otolaryngology department.

Materials and methods

The Stockport National Health Service (NHS) foundation trust serves a population of 300 000. All patients referred to the trust between 1 January and 31 December 2005 were included in this study. Referrals were made by general practitioners, using designated forms sent to the hospital's oncology

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TABLE I

NICE GUIDELINES FOR SYMPTOMS THAT SHOULD PROMPT URGENT SPECIALIST REFERRAL

Unexplained neck lump of recent onset, or previously undiagnosed lump that has changed over 3–6 wk period
Unexplained, persistent swelling in parotid or submandibular gland
Unexplained, persistent sore or painful throat
Unilateral, unexplained pain in head and neck area for >4 wks, associated with otalgia but normal otoscopy
Unexplained ulceration of oral mucosa, or mass persisting for >3 wks
Unexplained red and white patches on oral mucosa which are painful, swollen or bleeding
Hoarseness for >3 wks, where chest X-ray excludes lung cancer

NICE = National Institute for Clinical Excellence; wk = week

appointment department. The forms used by the trust featured all the referral criteria stipulated by the national guidelines, but were slightly more comprehensive (Appendix 1). Following referral, the patients were seen by one of two consultants within a two-week period. All patients referred in this manner were identified.

Concurrently, all patients with a histological diagnosis of head and neck malignancy were identified, using the computer records of the pathology department. Patients with cutaneous malignancies were excluded, because the referral guidelines for these conditions differed from those for head and neck cancer.[3] Patients with thyroid malignancies were also excluded, because these conditions were dealt with exclusively by general surgeons within our institution.

The following data were obtained for these two groups of patients: date of referral, date of appointment, reason for referral and NICE guideline heading under which the referral fell, clinical findings, and final diagnosis. Using patient case numbers allowed us to identify patients who fell into both groups, i.e. those referred urgently who were found to have malignancy. Additionally, if a patient had histologically confirmed malignancy but had not been referred via the urgent referral guidelines, their notes were reviewed to identify reasons for such non-referral.

Results

A total of 177 patients were urgently referred to the otolaryngology clinic with suspected head and neck malignancy during the one-year study period. All but eight (95.5 per cent) were seen within a two-week period. The symptoms prompting referral are shown in Table II. The commonest causes of referral were hoarseness and neck lumps. A total of 107 (60 per cent) patients were referred appropriately according to the NICE guidelines.

Of the patients referred urgently, 22 were ultimately diagnosed with malignant disease. This gives a 12 per cent 'pick-up' rate. The details of these diagnoses are shown in Table III. Seven (32 per cent) of these patients had lymphoma and six (27 per cent) had squamous cell carcinoma of the upper aerodigestive tract. In the remaining (benign) patients, a variety of

TABLE II

STUDY PATIENTS: SYMPTOMS PROMPTING REFERRAL

Symptom	*n*	%	Symptom fits NICE guidelines?
Lump	27	15	Y
Salivary gland swelling	4	2	Y
Sore throat	19	11	Y
Otalgia	2	1	Y
Ulceration	4	2	Y
Red/white patches	1	<1	Y
Hoarseness	50	28	Y
Dysphagia	13	7	N
Globus symptoms	12	7	N
Persistent cough	4	2	N
Aural symptoms	4	2	N
Choking	3	2	N
Nasal discharge	3	2	N
Dysphonia	2	1	N
Other	29	16	N

NICE = National Institute for Clinical Excellence; Y = yes; N = no

diagnoses were made. Thirty had some form of vocal fold disorder, 17 were diagnosed with laryngopharyngeal reflux, five with reactive lymphadenopathy and four with unilateral tonsillar enlargement. Twenty-five were discharged with a diagnosis of benign pathology (e.g. mucous retention cyst). In 17, either no abnormality was found or the patient's condition had improved by the time of their appointment.

During the one-year study period, 39 patients were diagnosed with head and neck malignancy within the trust; however, only 22 (56 per cent) of these patients presented via the urgent referral pathway. In other words, 44 per cent of these patients with cancer came from outside the urgent referral pathway. The notes of these patients were perused in an attempt to determine why they had not been referred urgently. A variety of reasons were identified, including: general practitioner referral for an urgent ENT appointment but not through the two-week pathway; identification of malignancy on routine follow up; and referral of an in-patient from another hospital department. For these patients, the median wait from the referral decision to the out-patient appointment was 15.5 days (range 5–269 days).

Discussion

No evidence exists to suggest that seeing a patient with head and neck cancer within two weeks of referral makes any difference to their outcome; however,

TABLE III

URGENT REFERRAL PATIENTS: DIAGNOSED MALIGNANCIES

Neoplasia site/type	*n*	%
Lymphoma	7	32
Larynx	3	14
Parotid	3	14
Metastases	3	14
Oral cavity	1	5
Pharynx	1	5
Submandibular gland	1	5
Bronchogenic	1	5
Oesophageal	1	5

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intuitively it would seem that minimising such delays is generally a good thing. We do know that patients find long waits and uncertainty about their diagnosis distressing.[6] A 1998 audit of national cancer waiting times showed that only 63 per cent of urgently referred patients were seen in hospital within two weeks,[7] and 28 per cent of patients considered that their condition had worsened while waiting for their first hospital appointment.[8]

Following the 1998 White Paper, a Cancer Services Collaborative was established to test new approaches to streamlining the processes between referral and first hospital visit. As a result of this, many hospitals set up new systems for handling urgent referrals and making appointments.[9] General practitioners were informed of the initial specialist referral guidelines,[2] and achievement of the two-week target was incorporated into the performance rating regime for NHS trusts.[10] This led to a 93.5 per cent compliance rate by the target date of 2000. Although some have stated that '...[such guidelines] are patronising to doctors, [and] ...most copies are likely to end up in the bin',[11] the guidelines are very definitely here to stay. In an ideal world, therefore, we would like all patients with cancer to be referred urgently via their general practitioner (Figure 1a). We acknowledge that there will always be a subset of patients which presents differently, e.g. as emergency admissions or referrals from other secondary care providers. Therefore, a perhaps more realistic scenario is shown in Figure 1b. In terms of these figures, the goal must be to get as many of the 'black circle' patients (i.e. those with malignancy) as possible to fall within the 'grey circle' (i.e. those referred by their general practitioner with suspected malignancy). The results of this audit show that there is some overlap, but this could certainly be improved upon.

Our observed 12 per cent pick-up rate is similar to the low yield found in other studies,[4,5,12,13] and the high incidence of newly diagnosed lymphoma is also consistent with observations reported by maxillofacial surgeons.[5] Whereas these clinicians did not identify any cases of squamous cell carcinoma in the urgently referred patients,[5] we found that patients with this cancer comprised more than 25 per cent of the total cancer cases detected. Perhaps this is not surprising, given the anatomical subsites managed by the two different specialties.

Most of the patient referrals we received accorded with the strict guidelines defined by NICE; however, there are a few interesting points to note.

Firstly, dysphagia is not defined by NICE as a symptom prompting referral to a head and neck specialist; instead, the guidelines suggest referral to an upper gastrointestinal specialist.[3] Obviously, there is a degree of overlap here, but we would caution against all dysphagic patients being referred to gastroenterologists. Patients with 'high' dysphagia may have neoplastic lesions of the hypopharynx which may not be detected during routine oesophagogastroduodenoscopy or upper gastrointestinal contrast imaging.[14] Although localisation of the site of dysphagia can be imprecise, we feel that any patient complaining of cervical or high dysphagia should be referred to an otolaryngologist.

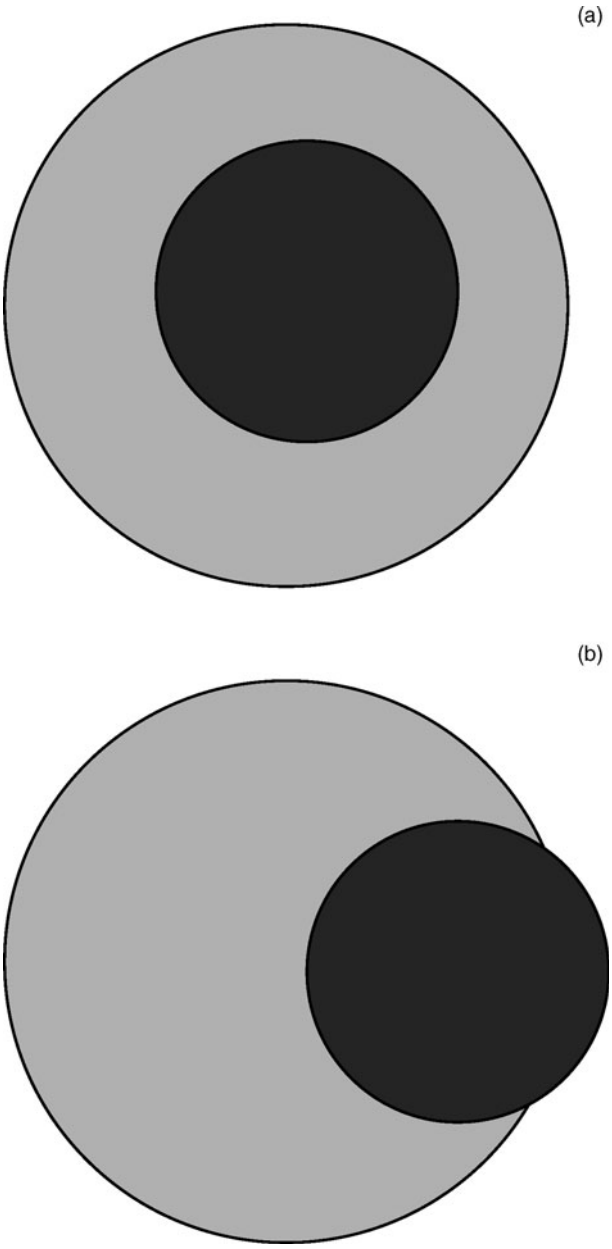

FIG. 1

(a) The ideal world: all patients with malignancy (black) fall within the group of patients referred by general practitioners with suspected malignancy (grey). (b) The real world: some patients will always be referred via alternative pathways.

Secondly, otolaryngologists see a number of patients with hoarseness secondary to laryngeal malignancy. Hoarseness has been reported as a presenting feature of bronchogenic malignancy;[15] however, a two-year, population-based, case–control study of over 125 000 patients did not find a single case of lung cancer presenting with hoarseness.[16] We therefore find it unusual that the NICE guidelines suggest that patients with persistent hoarseness be initially referred for a chest X-ray and only referred to an otolaryngologist if this is negative, as this would surely result in delayed laryngoscopic investigation. We feel that an

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otolaryngologist should see all hoarse patients in the first instance, unless they have chest symptoms as well.

- **The UK National Institute for Clinical Excellence two-week referral pathway was introduced to 'fast-track' patients with suspected cancer**
- **Ideally, all patients with suspicious symptoms will be referred to secondary care via this pathway**
- **In this study, 12 per cent of patients referred to the study institution with suspected head and neck cancer had histologically defined malignancy**
- **Of those patients with malignancy, 44 per cent had come from outside the urgent referral pathway**

It may appear that some patients were referred to us with apparently non-malignant symptoms (e.g. globus and otorrhoea) and that some were found to have no clinical findings. It is easy to diagnose benign disease with the appropriate equipment in the ENT clinic, and, ultimately, if a general practitioner is sufficiently worried about a patient to make an urgent referral then that patient should be seen urgently whether they meet the NICE guidelines or not. This may increase the workload of the department,[17] but we feel this is a worthwhile price to pay if patients' malignancies are detected earlier. However, other workers have found that the main delay in treatment is due to patients ignoring the significance of their symptoms;[13,18–20] therefore, improved patient education may be of more importance than an arbitrarily imposed target.

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Appendix 1. Guidelines for referral of suspected head and neck cancers

Hoarseness persisting for more than six weeks
Ulceration of oral mucosa persisting for more than three weeks
Oral swelling persisting for more than three weeks
All red, or red and white, patches on oral mucosa
Dysphagia persisting for three weeks or more
Unilateral nasal obstruction, particularly when associated with purulent discharge
Unexplained tooth mobility not associated with periodontal disease
Unresolving neck masses persisting for more than three weeks
Cranial neuropathies
Orbital masses

The level of suspicion is further increased if the patient is a heavy smoker or heavy alcohol drinker, aged over 45 years, and male. Other forms of tobacco use (e.g. chewing betel, gutkha or pan) should also arouse suspicion.

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