

Comparison of the diagnostic yield of medical and dental referrals an oral and maxillofacial 2 weeks rule clinic

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ABSTRACT

Background: The 2 weeks wait clinic initiative is used as a fast track referral process, to assess patients with suspected cancer. The United Kingdom's National Institute of Clinical Excellence has issued guidelines for which patients should be referred to this service for suspected oral, head and neck cancers. Both general medical practitioners (GMPs) and general dental practitioners (GDPs) can refer to this service. **Objective:** To ascertain how many of the 2 weeks rule referrals resulted in positive oncology cases. Also, to compare the diagnostic yield of cancer diagnoses between referrals from GMPs and GDPs. **Methods:** Collection and analysis of 2 weeks rule referrals and the clinical outcome for these patients, to an oral and maxillofacial surgery unit for a 6 months period. **Results:** Overall, 65% of the patients seen in the clinic were referred by a GMP and 12.5% of these had a diagnosis of cancer. The remaining 35% were referred by a GDP and 10% of these had cancer. There was no statistically significant different diagnostic yield between the two groups. **Conclusion:** A significant number of patients with confirmed cancer are referred from medically qualified practitioners. Further awareness and education of oral, head and neck cancers is warranted in this group, including at an undergraduate level.

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INTRODUCTION

Two weeks rule clinics are used in various medical specialities around the world, as a fast track outpatient service to assess patients with a possible cancer diagnosis.

The 2 weeks rule system was introduced for head and neck cancer in December 2000, based on national referral guidelines were by the United Kingdom Department of Health.^[1] These guidelines included 10 signs and symptoms of head and neck cancer, to facilitate


general practitioners in making appropriate and early referrals [Table 1].^[1]

Head and neck cancer describes neoplasms arising from the oral cavity, larynx, pharynx, salivary glands and related sites.^[2] They are among a group of the less common cancers, with approximately 6700 new cases diagnosed in England and Wales each year.^[3,4]

Better prognosis is associated with early detection while late presentation and neck node metastasis drastically reduce long-term survival. The relatively poor survival prognosis for head and neck cancers is linked to lifestyle factors, co-morbidity, late presentation and the high median age of incidence.^[5,6]

Aims and objectives

The aim of this study was to evaluate the success of the 2 weeks rule clinic in oral and maxillofacial

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surgery (OMFS) unit at St. Richard’s Hospital, West Sussex, United Kingdom.

The objectives were:

- To assess referrals made to the department
- To determine whether these referrals used the correct referral form
- To ascertain how many of the referrals resulted in cancer diagnosis
- To compare the diagnostic yield of cancer diagnoses between referrals from general medical practitioners (GMPs) and general dental practitioners (GDPs).

METHODS

A list of all referrals to the OMFS 2 weeks rule clinic, from both GMPs and GDPs, over a 6 months period was sourced retrospectively from the hospital’s SEMA electronic data management system.

The outcome for each patient was reviewed, and cross-referenced to the cancer register of all confirmed cancer cases, held by the hospital’s multi-disciplinary team office.

RESULTS

Of the 172 patients referred during the study period, 98 (65%) were referred by a GMP; the remaining 60 (35%) were from a GMP [Table 2]. Fourteen patients (12.5%) were have found to have a cancer diagnosis from the GMP referrals, as compared to 6 (10%) from GDPs, which was not a statistically significant difference (Chi-squared $P = 0.626$).

Use of correct referral proforma in confirmed cancer cases was 86% for GMPs, and 100% for GDPs.

DISCUSSION

This study demonstrated a diagnostic yield of confirmed cancer cases from GMP referrals of 12.5%, and from GDPs of 10%, with no statistically significant difference in cancer pick up rates between the two. It was hypothesised that GMPs may have a higher yield, as anecdotally cancer patients are thought to present at a later and more advanced stage to GMPs than GDPs, and GMPs in the United Kingdom are cost-free at the point of use.

Both groups compared favourably to other studies of OMFS 2 weeks rule clinics, including Singh and Warnakulasuriya,^[7] Shah *et al.*,^[8] Hobson *et al.*,^[9] and McKie *et al.*,^[10] which found pick-up rates of 7.9%, 6%, 12%, and 10.9%, respectively.^[11]

Table 1: Department of Health referral guidelines for suspected head and neck cancer^[11]

- Unexplained red and white patches (including suspected lichen planus) of the oral mucosa that are: painful, swollen or bleeding
- Unexplained ulceration of the oral mucosa or mass persisting for more than 3 week
- In adult patients with unexplained tooth mobility persisting for more than 3 weeks (urgent dental referral)
- Any patient with hoarseness of voice persisting for more than 3 weeks
- An unexplained lump in the neck that has recently appeared or a lump that has not been diagnosed before and changed over a period of 3 to 6 weeks
- Unexplained persistent swelling in the parotid or submandibular glands
- Unexplained persistent sore or painful throat
- Unilateral unexplained pain in the head and neck area for more than 4 weeks, associated with otalgia but normal otoscopy

Table 2: Profession versus cancer diagnosis cross-tabulation

	Cancer diagnosis		Total
	No	Yes	
Profession			
General medical practitioner			
Count	98	14	112
% within profession	87.5%	12.5%	100.0%
% within cancer diagnosis	64.5%	70.0%	65.1%
General dental practitioner			
Count	54	6	60
% within profession	90.0%	10.0%	100.0%
% within cancer diagnosis	35.5%	30.0%	34.9%
Total			
Count	152	20	172
% Within profession	88.4%	11.6%	100.0%
% Within cancer diagnosis	100.0%	100.0%	100.0%

GMPs were less likely to use the correct referral form, with the remainder using a traditional written letter. McKie *et al.*, noted a 12.8% cancer detection rate in referrals that conformed to the national guidelines compared to 6.2% in referrals that did not.^[10]

CONCLUSIONS

This study demonstrates that when compared to other studies, local GMPs and GDPs performed well in their referrals.

The comparable rates of cancer yield, and therefore presentations, between referrals from medically and dentally qualified practitioners, could indicate that both groups could equally benefit from further education about the topic. It may also indicate that a greater level of undergraduate teaching about both head and neck, and oral pathology, to medical students would be beneficial given the demonstrated likelihood that patients with these cancers will present to a GMP.

In the developing world, many patients are more likely to have access to doctors rather dentists, so increased

international education and recognition about oral, head and neck cancers with medical professionals is warranted. This could be beneficial for both public health education about modifiable risk factors, and diagnosis.

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