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British Journal of Oral and Maxillofacial Surgery 52 (2014) 128–133

BRITISH Journal of Oral and Maxillofacial Surgery

www.bjoms.com

Analysis of time taken to discuss new patients with head and neck cancer in multidisciplinary team meetings

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Accepted 7 October 2013
Available online 23 November 2013

Abstract

Multidisciplinary team (MDT) meetings have an important role in the management of head and neck cancer. Increasing incidence of the disease and a drive towards centralised meetings on large numbers of patients mean that effective discussions are pertinent. We aimed to evaluate new cases within a single high volume head and neck cancer MDT and to explore the relation between the time taken to discuss each case, the number of discussants, and type of case. A total of 105 patients with a new diagnosis of head and neck malignancy or complex benign tumour were discussed at 10 head and neck cancer MDT meetings. A single observer timed each discussion using a stopwatch, and recorded the number of discussants and the diagnosis and characteristics of each patient. Timings ranged from 15 to 480 s (8 min) with a mean of 119 s (2 min), and the duration of discussion correlated closely with the number of discussants ($r_s = 0.63$, $p < 0.001$). The longest discussions concerned patients with advanced T stage ($p = 0.006$) and advanced N stage ($p = 0.009$) disease, the elderly ($p = 0.02$) and male patients ($p = 0.05$). Tumour site and histological findings were not significant factors in the duration of discussion. Most discussions on patients with early stage tumours were short (T1: 58% less than 60 s, mean 90) and fewer people contributed. Many patients, particularly those with early stage disease, require little discussion, and their treatment might reasonably be planned according to an agreed protocol, which would leave more time and resources for those that require greater multidisciplinary input. Further studies may highlight extended discussions on patients with head and neck cancer, which may prompt a review of protocols and current evidence.

Keywords: Multidisciplinary team; MDT; Head and neck cancer; Discussion length

Introduction

Head and neck cancer covers a wide spectrum of histological types in a complex anatomical site, and patients often have serious coexisting conditions. Data suggest that the overall incidence of the disease in the UK is rising. The national head and neck cancer audit by DAHNOs (Data for Head and Neck Oncologists) estimated that between 2010 and 2011 the incidence had risen by over 600 cases (from 6747 to 7354, respectively) in England and Wales and included neoplasms arising from the oral cavity, larynx, oropharynx, hypopharynx, nasopharynx, and major salivary glands.[1,2] Allied with this there is a continued trend to manage cancer cases in a smaller number of high volume centres,[1,2] which highlights the need for efficient and meaningful discussions.

Diagnosis and treatment of these patients require input from multiple medical professionals and a further spectrum of allied health professionals. Management involves dealing with the effects of the disease itself as well as the disabling effects of treatment, and to do this a multidisciplinary team (MDT) approach has become widely adopted.[3] It has been

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http://dx.doi.org/10.1016/j.bjoms.2013.10.001

recommended that all patients with head and neck cancer are seen by a MDT irrespective of type or stage,[1–3] and there is evidence that this increases the accuracy of cancer staging and improves outcomes.[4,5] Friedland et al.[6] compared survival of patients who had been treated by an MDT with those who had not, and showed that survival was significantly better in those treated by an MDT when stage, age at diagnosis, and year of diagnosis were controlled for in the analysis. The perceived benefits of treatment by an MDT are improved communication between health professionals, coordinated and continuous patient care, better clinical outcomes, and better opportunities for education, audit, and research.[7]

Following the Improving Outcomes Guidance recommendations of 2004 there has been a move towards larger specialist centres. However, big is not always best, and an MDT in a large centre might not cope with the increased workload.[8] There is also concern about the lack of level I evidence to support the benefits of an MDT approach,[6] and it is difficult to make valid comparisons of outcomes between centres.[3] Nevertheless, in the absence of level I or II data, these studies form the basis of the clinical guidelines which inform current best practice.[6] Some clinicians argue that delays and expense may justify the referral of only advanced cases of malignancy to the MDT, and that early stage disease that is treated outside an MDT would achieve similar outcomes.[9]

This study is based on a large MDT in a regional unit that serves a population of over 2.8 million, and around 900 new referrals are discussed each year. The region has a particularly high incidence of squamous cell carcinoma with 450 new cases/year, which reflects an incidence of 16/100,000/year (compared with the UK mean of 12/100,000/year).[10] The weekly MDT lasts an hour, during which new complex benign or malignant neoplasms followed by PET scans, and patients with recurrence and ongoing tumours are discussed. It ends with the histopathological staging of primary tumours that are going to be resected. Patients with cancers of the skull base and thyroid are discussed separately; each is scheduled for 30 min once a fortnight. Our aim was to explore the factors that influence the duration of the discussion and the number of discussants for new cases.

Method

We prospectively studied discussions on new cases at 10 head and neck MDT meetings held at Aintree University Hospital over 2 periods in 2011. Five were consecutive meetings between January and February, and 5 were consecutive meetings between August and September. Discussions on all patients with a new diagnosis of head and neck cancer or complex benign tumour in these periods were included. Discussions on PET scans and patients with disease of the thyroid or base of the skull, recurrence, or ongoing tumours, were excluded.

A single observer used a stopwatch to time the discussions in seconds from when a case was announced until the next was announced. The duration of any discussion not relevant to the case was noted and the time deducted. If a case was discussed on more than one occasion during the same meeting because a member of the team had not been present initially or a subsequent case had similarities, the total sum of the discussions was recorded.

The number of people who contributed verbally to each case was recorded (including the chair). During the meeting the coordinator filled out the Somerset Cancer Register database, a UK web-based clinical data collection register for cancer with a designated head and neck section. From this, the patient's characteristics, type of disease, and the outcome of the meeting were extracted for the purposes of the study.

Spearman's correlation was used to quantify the association between numerical or ordinal characteristics (duration of discussion, age, and number discussing the case). Associations between the patient's characteristics and duration of discussion in seconds were tested using the Mann–Whitney or Kruskal–Wallis test as appropriate, as were associations with the number discussing the case. Duration of discussion was also grouped (up to 60 s, 61–120, and more than 120 s) to provide a better descriptive presentation of results in Table 1.

The single observer recorded the total number of people who attended the meeting including those who arrived late and those who departed before the end. The position of those in the discussion and their roles were not recorded.

Results

The mean (SD) age of the 105 patients was 62 (16) years, and 75 (71%) were male. A total of 15 (14%) had complex benign or non-malignant disease, and 90 (86%) had new malignancies. Tumour sites were larynx ($n = 32$, 30%), oral cavity ($n = 21$, 20%), oropharynx ($n = 26$, 25%), and other ($n = 23$, 22%). In 3 cases it was not known.

The median (IQR) time taken to discuss the cases was 90 (60–180) s (range 15–480), with a total time over all the cases of 208 min (mean 119 s). The median (IQR) number of people involved in the discussion was 4 (3–5) (range 1–10). The discussions were longer the more people that joined in ($r_s = 0.63$, $p < 0.001$, Fig. 1). The median duration was 30 s when fewer than 3 people took part ($n = 8$), 90 s when there were 3 ($n = 39$) or 4 ($n = 22$), 165 s when there were 5 ($n = 20$), and 180 s when there were more than 5 ($n = 16$). There was no significant difference in the times taken to discuss cases between the 2 periods ($p = 0.48$) or in the number of discussants ($p = 0.08$). In the first group of meetings the mean number of discussants was 3.8; in the second group it was 4.3. The mean duration of discussion was 125 s in the first group of meetings and 113 s in the second.

There was no significant correlation between age in years and duration of discussion ($r_s = -0.07$, $p = 0.50$). Relations between other factors and duration of discussion are shown