Short Communication

The views and practice of oncologists towards nutritional support in patients receiving chemotherapy

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Malnutrition in patients with cancer is common and an adverse prognostic indicator. A questionnaire answered by 357 (72%) UK specialist oncological trainees suggests that they lack the ability to identify factors that place patients at risk from malnutrition. Major barriers to effective nutritional practice included lack of guidelines, knowledge and time.

As long ago as 1932, malnutrition was identified as a prognostic indicator of the outcome in cancer patients (Warren, 1932). Up to 80% of patients with cancer are malnourished at presentation (Dewys et al., 1980; O’Gorman et al., 1998), and in up to 20%, malnutrition is a significant contributing factor to their death (Ottery, 1996). Studies show poorer response to treatment, a reduced quality of life and increased risk of death in those patients who have lost weight (Oveson et al., 1993; Andreyev et al., 1998; Ross et al., 2004).

Best practice, as stated by NICE Guidelines requires that patients should undergo nutritional assessment so that those shown to be at risk can be considered for treatment (National Institute for Clinical Excellence, 2006). The publication Nutrition and patients: a doctor’s responsibility (Kopelman and Lennard-Jones, 2002) set out to raise awareness of the fundamental importance of nutritional care in everyday clinical practice. Yet, there is overwhelming evidence to suggest that few doctors deal with malnutrition adequately (McWhirter and Pennington, 1994; Edington et al., 2000; Kelly et al., 2000; Beck et al., 2002). An understanding of health professionals’ attitudes to nutrition, particularly those of oncologists who look after patients with the highest prevalence of malnutrition, is important if it is to be recognised efficiently and steps taken to address it.

The aims of the study were three-fold: to develop an understanding of the extent to which oncologists are able to identify malnutrition, to elucidate the importance which oncologists place on nutrition as a variable in the clinical care and outcome of their patient and to identify the barriers that might exist in the decision to advocate nutritional support.

MATERIALS AND METHODS

A case-scenario-based questionnaire was developed and piloted to address three issues: (1) the identification of malnutrition, (2) the importance of nutritional status and support and (3) the barriers preventing nutritional intervention. Two case scenarios in patients with gastrointestinal cancer were used, the first related to identification of malnutrition and the second to the role and indication for nutritional support for a patient who had lost weight. Additionally, their views on the importance of various factors in treatment outcome and confidence in assessing malnutrition were assessed.

The final version of the questionnaire was piloted in all specialist oncological trainees at one centre. Subsequently, on the basis of the responses recorded, it was decided to send it out to all UK trainees, identified by their membership of the Association of Cancer Physicians, UK or the Royal College of Radiologists, UK. The scenarios were content validated by a group of defined UK experts on malnutrition, who set the expert standard.

Results were analysed using SPSS v13. Frequencies were described and χ² tests were used to assess whether there were associations between nutritional practice, knowledge and attitudes and clinical speciality, nutritional education or years of clinical and oncology experience. Significance was established at P<0.05.

RESULTS

Between April and June 2003, 61 pilot questionnaires were distributed to trainees in one institution. Subsequently, between September 2004 and April 2005, a further 433 questionnaires were sent out to all trainees in the UK. Of 494 questionnaires in total, 357 were returned (72% response rate). Of these, six were not completed because the recipient was no longer working in oncology, and 14 because they were not available at the given address. Of the 337 completed, the maximum missing data for any...
Do oncologists consider nutrition important to outcome?

Almost all specialist oncological trainees thought that 'stage' or 'performance status' was very important to the outcome, but nearly two-thirds (65%,  n = 217) rated nutritional status as very important. Age and patient attitude were rated as much less important (Table 2a).

In the case study scenario, nearly all trainees thought that the patient’s morbidity and quality of life would be affected by nutritional intervention. A substantial majority also felt that nutritional intervention would play a role in hospital stay (76%,  n = 255) and treatment toxicity (78%,  n = 261), but a larger number indicated uncertainty. Trainees were least likely to agree that nutritional intervention would play a role in mortality with regard to this patient (Table 2b).

Can oncologists identify malnutrition?

The majority of specialist oncological trainees (80%,  n = 267) expressed uncertainty or a lack of confidence in their ability to identify malnutrition. Those who had undergone undergraduate nutritional lectures were more confident (P < 0.01), but no association was found between confidence and speciality (medical vs clinical oncologist) age, medical or oncological experience or type of hospital was seen.

There was a discrepancy (Table 3a) between trainees who significantly more frequently identified the case patient as definitely malnourished in comparison to experts (Table 3b), again specialist oncological trainees (29%,  n = 261) gave significantly different replies to experts (Table 3c; case scenario 2), again specialist oncological trainees gave significantly different replies to experts (P < 0.05), who considered nutritional intervention as necessary at a lower level of weight loss than the trainees.

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Table 1 Respondent characteristics

| Characteristic                  | Oncologist SpR. n (%) |
|--------------------------------|-----------------------|
| Gender                         |                       |
| Male                           | 144 (37)              |
| Female                         | 210 (62)              |
| Not indicated                  | 3 (<1)                |
| Age (years)                    |                       |
| ≤ 30                           | 62 (18)               |
| 31–34                         | 175 (52)              |
| 35–39                         | 77 (23)               |
| ≥ 40                           | 17 (5)                |
| Not indicated                  | 6 (2)                 |
| Specialisation                 |                       |
| Medical Oncologist             | 139 (41)              |
| Clinical Oncologist            | 182 (54)              |
| Surgery                        | 4 (1)                 |
| Palliative Care                | 2 (<1)                |
| Pediatrics                     | 3 (<1)                |
| Hematology                     | 1 (<1)                |
| GP                             | 1 (<1)                |
| Not indicated                  | 5 (2)                 |
| Place of training              |                       |
| UK                             | 286 (85)              |
| Europe                         | 24 (7)                |
| Australia                      | 4 (1)                 |
| South Asia                     | 11 (3)                |
| South Africa                   | 4 (1)                 |
| Middle East                    | 2 (<1)                |
| West Indies                    | 1 (<1)                |
| Not indicated                  | 4 (1)                 |
| Clinical experience (years since full medical registration) | |
| <10                            | 194 (58)              |
| ≥ 10                           | 138 (41)              |
| Not indicated                  | 5 (2)                 |
| Oncologic experience (years working in oncology) | |
| <5                             | 174 (52)              |
| ≥ 5                            | 158 (47)              |
| Not indicated                  | 5 (2)                 |
| Nutritional education          |                       |
| Undergraduate lectures         | 118 (35)              |
| Postgraduate education         | 35 (10)               |
| Interest in further nutritional training | 270 (80) |

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Table 2 Do trainee oncologists consider nutrition important to outcome?

| (a) Importance of different factors to outcome (0 not important–5 very important) (total completed 334) |
|--------------------------------------------------------------------------------------------------|
| 4–5 response, n (%) | Median | Range |
|---------------------|--------|-------|
| Stage               | 321 (96) | 5    | 3–5 |
| Performance status  | 324 (97) | 5    | 3–5 |
| Nutritional status  | 217 (65) | 4    | 1–5 |
| Age                 | 124 (37) | 3    | 0–5 |
| Patient attitude    | 127 (38) | 3    | 0–5 |

| (b) Importance of nutritional intervention to outcome |
|-----------------------------------------------------|
| ‘In a patient with 11% weight loss would nutritional intervention play a role’ (Yes, No, Uncertain) (total completed 335) |
|--------------------------------------------------------------------------------------------------|
| Yes, n (%) | No, n (%) | Uncertain, n (%) |
|----------------|------------|-----------------|
| Mortality      | 188 (56)   | 57 (17)         | 90 (27) |
| Morbidity      | 305 (91)   | 7 (2)           | 23 (7)  |
| Hospital stay  | 255 (76)   | 10 (3)          | 67 (20) |
| Quality of life| 318 (95)   | 0 (0)           | 17 (5)  |
| Toxicity from treatment | 261 (78) | 27 (8) | 47 (14) |

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DISCUSSION

The study suggests that oncologist trainees accept that nutritional status and nutritional intervention are important to outcome in patients receiving active therapy for malignancy. However, there is an inability to identify patients at risk of malnutrition and to refer those who may benefit from early nutritional intervention. Further barriers include a lack of recognised guidelines as to when to recommend nutritional intervention for weight loss.

Timely and appropriate interventions for patients with cancer require adoption of routine nutritional screening and evaluation (Ottery, 1995). Yet, hospital surveys suggest nutritional risk screening and assessment as part of routine practice is generally not performed (Duncan and Silk, 1997; Kondrup et al, 2002). It has been shown that malnutrition is largely unrecognised by health professionals (Edington et al., 2000). Similar findings more recently have come from The Council of Europe Group survey on nutritional care in European hospitals (Beck et al, 2002). Our study suggests that these findings on generalised hospital populations are also relevant in the oncological setting. This is particularly important as oncological treatment is increasingly given in the ‘outpatient’ setting where any standard ward-based nutrition assessment tool is not typically used. This study suggests that oncology trainees fail to identify patients appropriately for nutritional assessment, not because they think it is unimportant but rather because of lack of ability, confidence and knowledge of important criteria, which should determine effective nutritional practice.

There are limitations inherent in the questionnaire as a method of survey. Ideally, stringent methods of validation and reliability testing are required. However, our questionnaire was developed after a pilot study. This study is also limited in that it addresses the outcome at which behaviour is directed rather than the actual behaviour. Further research would need to ascertain actual rather than reported nutrition practice.

The study suggests that future research also needs to be directed at the best method of providing effective, concise and relevant nutritional education interventions to oncologist trainees.

In conclusion, oncologists lack the ability to identify factors that place patients at risk from malnutrition. Although oncologists acknowledge the importance of nutritional support, barriers such as lack of knowledge, clear guidelines and lower priority because of time constraints may prevent referral for, or direct nutritional intervention. Until the ethos of optimal nutritional management is strengthened in clinical practice, probably through continuing effective education and training at all levels within the medical profession, the rate of untreated malnutrition may remain unacceptably high and continue to compromise patient outcomes.

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