

Anxiety and depression in head and neck out-patients

V VEER, S KIA, M PAPESCH

Abstract

Objectives: To investigate the prevalence of psychological distress in head and neck out-patients.

Design: We used the Hospital Anxiety and Depression Scale to screen 106 patients for mood disorders in a London head and neck ENT out-patient clinic.

Setting: Queen's Hospital, Romford, UK.

Participants: One hundred and six patients attending a head and neck out-patient clinic.

Main outcome measure: Hospital Anxiety and Depression Scale score.

Results: Approximately 39 per cent of patients had a possible anxiety disorder (10 per cent were rated as severe), and 27 per cent had possible depression (10 per cent were rated as severe).

Conclusion: We recommend that a member of the head and neck multidisciplinary team should be trained to identify and correctly refer psychologically distressed patients to appropriate existing psychiatric services.

Key words: Head And Neck Neoplasms; Anxiety; Depression

Introduction

Suspicious neck masses are typically referred to the head and neck clinic, and one can expect a certain amount of apprehension on the part of patients, who in many cases have been urgently referred for a 'growth on their neck'. This anxiety is likely to be particularly severe in follow-up patients who are returning for the results of investigations, or for assessment of treatment outcomes. This process can be psychologically demanding for patients. This psychological stress was the focus of this study.

Anxiety and depression manifest with disabling symptoms: poor motivation, inability to focus clearly, suicidal ideation, etc. These symptoms may have a negative impact upon the patient's ability to comply with treatment regimes (e.g. chemoradiotherapy) or to cope with any morbidity resulting from treatment¹ (e.g. laryngectomy). More subtle issues may be also present, such as those described by Scalzi *et al.*,² who found that patients suffering from anxiety were less able to effectively process information delivered to them by their doctors. All of these factors may have a detrimental effect on patients' quality of life and, conceivably, upon their eventual prognosis.

To investigate the amount of psychological distress present amongst head and neck patients, a screening tool measuring mood disorders was necessary. The Hospital Anxiety and Depression Scale (Zigmond and Snaith)³ is a simple self-evaluation tool which

has been extensively validated and used for over 25 years.⁴ This scale is especially useful in hospital settings as it does not rely on the somatic symptoms of anxiety and depression, which may pre-exist in some patients due to other, comorbid conditions (e.g. weight loss and poor appetite).

The Hospital Anxiety and Depression Scale is a questionnaire consisting of 14 questions, seven assessing anxiety symptoms and seven assessing depression symptoms. Each question is answered by the patient by giving a mark from a four-point grading system (i.e. zero to three), giving a total maximum score of 21 for anxiety and 21 for depression. Total scores are rated as normal (0–7), mild (8–10), moderate (11–14) or severe (15–21), for both depression and anxiety.⁴ Zigmond and Snaith originally designed the scale with a value of 11 as the cut-off point for considering that the patient had a mood disorder. However, a 2002 review suggested that the optimal balance between sensitivity and specificity was achieved by defining a score of 8 or above as a clinically significant result.⁴ Using this limit, the Hospital Anxiety and Depression Scale has a sensitivity and specificity of approximately 0.80 for both depression and anxiety.⁴

Materials and methods

Over two months (June and July 2009), patients attending the head and neck out-patient clinic at

Queen's Hospital, Romford, were asked to complete the Hospital Anxiety and Depression Scale questionnaire. This patient group included all new *urgent cancer* referrals and follow-up appointments for those suspected or diagnosed with a head and neck cancer. Patients who had already completed the Hospital Anxiety and Depression Scale questionnaire in a previous clinic were excluded from completing it a second time. Questionnaires were also completed in the pre-assessment clinic, by those awaiting surgery for either investigation or treatment of head and neck cancer. All questionnaires were answered anonymously and completed before the patient saw the doctor. By having patients complete the questionnaire before their consultation, we attempted to avoid confusing the data with variables such as patient satisfaction with their doctor, information provided, time waited, outcome of consultation, etc.

Completed questionnaires were categorised according to whether they had been completed by (1) patients new to the clinic (i.e. who had never attended the head and neck out-patient clinic before); (2) patients waiting for investigations or the results of investigations; (3) patients who knew their diagnosis and were awaiting treatment; or (4) patients who had been treated in the past and were now being followed up to check for recurrence, etc.

The questionnaires were then scored and patients designated as normal or possible mild, moderate or severe anxiety and/or depression, using the limits mentioned above, for each patient group.

Results and analysis

One hundred and six patients agreed to complete the Hospital Anxiety and Depression Scale questionnaire.

Reasons for not participating in the study included: (1) not receiving a questionnaire, as the nursing staff were too busy dealing with more pressing clinical duties (this was by far the most common reason); (2) not being able to complete the questionnaire before being called for their consultation (incomplete questionnaires were excluded); and (3) refusal (reasons for refusal were not sought).

Table I shows the Hospital Anxiety and Depression Scale data for anxiety, for the different patient groups.

Table II shows the Hospital Anxiety and Depression Scale data for depression, for the different patient groups.

Discussion

There are no previously published reports of the Hospital Anxiety and Depression Scale being used to evaluate head and neck clinic patients in this way. Several articles have reported its use for screening for depression in patients with tinnitus,⁵ Ménière's disease⁶ and other conditions with a suggested psychological component. The Scale has also been used to assess patients diagnosed with head and neck cancers. Chen *et al.* found that, even before starting radiotherapy treatment, 58 per cent of head and neck cancer patients had mild to

TABLE I
HOSPITAL ANXIETY AND DEPRESSION SCALE DATA FOR ANXIETY, FOR THE DIFFERENT PATIENT GROUPS

Anxiety level*	Pts	
	n	%
<i>New pts</i> [†]		
Normal	11	24.4
Mild	19	42.2
Moderate	10	22.2
Severe	5	11.1
<i>Pts awaiting I or I results</i> [‡]		
Normal	7	26.9
Mild	8	30.8
Moderate	9	34.6
Severe	2	7.7
<i>Pts awaiting H&N Ca treatment</i> ^{**}		
Normal	3	15.8
Mild	4	21.1
Moderate	8	42.1
Severe	4	21.1
<i>FU pts after H&N Ca treatment</i> [§]		
Normal	9	56.3
Mild	3	18.8
Moderate	4	25
Severe	0	0
<i>Overall anxiety score</i> ^{#a}		
Normal	30	28.3
Mild	34	32.1
Moderate	31	29.2
Severe	11	10.4

*From Hospital Anxiety and Depression Scale scores; see Introduction for diagnostic ranges. Patients considered to have an anxiety disorder: [†]75.6% with cut-off score of 8, 33.3% with cut-off of 11; [‡]73.1% with cut-off of 8, 42.3% with cut-off of 11; ^{**}84.2% with cut-off of 8, 63.2% with cut-off of 11; [§]43.8% with cut-off of 8, 25% with cut-off of 11; [#]71.7% with cut-off of 8, 39.6% with cut-off of 11. ^aTaking all results into account. Pts = patients; I = investigation; H&N Ca = head and neck cancer; FU pts = follow-up patients

severe depression. This figure rose significantly during treatment.⁷ Siupsinskiene *et al.* found that one-third of patients who had been treated for head and neck cancers had some form of psychiatric morbidity.⁸ Our study concentrated on a less specific patient population, but still showed rather alarming levels of depression and anxiety.

Study limitations

One of the limitations of this study was the considerable heterogeneity of the patients studied. Our patients ranged from those with completely benign conditions, through those awaiting the results of diagnostic investigations, to patients undergoing long term follow up of head and neck cancers. We decided on this approach in order to better represent a typical head and neck clinic, without focusing on one particular patient subgroup; this may or may not have skewed the results away from the 'normal' out-patient population.

Completion of the questionnaire was not a mandatory requirement, and therefore we could not rule out a participation or nonparticipation bias.

The Hospital Anxiety and Depression Scale was designed only as a screening tool. Therefore, all the patients who were categorised as having a

TABLE II

HOSPITAL ANXIETY AND DEPRESSION SCALE DATA FOR DEPRESSION,
FOR THE DIFFERENT PATIENT GROUPS

Depression level*	Pts	
	n	%
<i>New pts</i> [†]		
Normal	30	66.6
Mild	12	26.6
Moderate	2	4.4
Severe	1	6.7
<i>Pts awaiting I or results of I</i> [‡]		
Normal	7	26.9
Mild	7	26.9
Moderate	9	34.6
Severe	3	11.5
<i>Pts awaiting H&N Ca treatment</i> ^{**}		
Normal	3	15.8
Mild	8	42.1
Moderate	4	21.1
Severe	4	21.1
<i>FU pts after H&N Ca treatment</i> [§]		
Normal	7	43.8
Mild	2	12.5
Moderate	4	25.0
Severe	3	18.8
<i>Overall depression score</i> ^{#a}		
Normal	47	44.3
Mild	29	27.4
Moderate	19	17.9
Severe	11	10.4

*From Hospital Anxiety and Depression Scale scores; see Introduction for diagnostic ranges. Patients considered to have a depressive disorder: [†]33.3% with cut-off score of 8, 42.3% with cut-off of 11; [‡]73.1% with cut-off of 8, 46.2% with cut-off of 11; ^{**}84.2% with cut-off of 8, 42.1% with cut-off of 11; [§]56.3% with cut-off of 8, 43.8% with cut-off of 11; ^a55.7% with cut-off of 8, 28.3% with cut-off of 11.

[#]Taking all results into account. Pts = patients; I = investigation; H&N Ca = head and neck cancer; FU pts = follow-up patients

psychological disorder may not have had any clinically significant problem. Without full psychiatric evaluation, we are unable to emphatically state that significant numbers of our head and neck clinic patients had a mood disorder. This limitation demonstrates the need for further evaluation of this patient group.

Some patients were not provided with Hospital Anxiety and Depression Scale questionnaires when the clinic was particularly busy, owing to shortages of nursing staff. This may also have introduced further bias into the study. The clinic may have been busy due to increased numbers of patients requiring more attention than others. These patients may have had different Hospital Anxiety and Depression scores (compared with patients present during less busy times). Without more accurate data, this bias cannot be delineated with any certainty.

Using a cut-off score of 8, the results suggest that, overall, 72 per cent of respondents may have an anxiety disorder and 56 per cent may have a depressive disorder requiring further psychiatric evaluation. Using the more conservative cut-off score of 11, this number drops to 40 per cent with a possible anxiety problem and 28 per cent with possible depression.

Looking more closely at the subgroups, unsurprisingly, it appears that patients steadily became more anxious as they passed through the system. Those awaiting treatment for head and neck cancer were the most anxious.

Using a cut-off score of 11, scores for depression appeared steadier, hovering at roughly the same level throughout the patient's journey through the service. However, a cut-off score of 8 resulted in a similar pattern as for anxiety.

Clinical applications

Anxiety and depression have been shown to reduce patients' ability to cope with illness, and may even reduce cancer survival rates.^{9,10} Spiegel *et al.*¹¹ randomised 86 patients with metastatic breast cancer to receive normal oncological care or the same care with psychological supportive therapies. Those in the psychological support arm had significantly higher survival rates, compared with those receiving normal care only (36.6 months compared with 18.9 months).

Taking into account the results of this study, one could expect some improvement in the quality of life of patients with head and neck conditions, if anxiety and depression levels were addressed. This clearly would require a more robust system, involving identification of such patients and treatment of those with proven mood disorders. One study by Sharpe *et al.*¹² used an electronic form of the Hospital Anxiety and Depression Scale to screen cancer patients in the clinic. Of those patients identified as having a mood disorder, 50 per cent had discussed this with their general practitioner and a third had been prescribed antidepressants, but only a few had taken a therapeutic dose for an adequate period. Therefore, the challenge is not only to identify these patients but also to ensure they receive appropriate treatment.

If we were to continue using the Hospital Anxiety and Depression Scale to screen head and neck clinic out-patients, we could refer patients with high anxiety and/or depression scores to their general practitioner for further evaluation and/or treatment. However, this may fail the most needy of patients. Depressed patients, in particular, are less likely to be motivated enough to see their general practitioner for further evaluation; this may also be true for anxious patients, for differing reasons. A more comprehensive process that referred these patients directly for evaluation and treatment would provide a superior service. This would certainly be appropriate for patients who had consistently high Hospital Anxiety and Depression Scale scores on serial questionnaires.

Head and neck multidisciplinary teams (MDTs) include surgeons, oncologists, histopathologists, radiologists, speech and language therapists, and nutritionists, to name but a few. Many MDTs include Macmillan cancer support nurses who may have some counselling training. There are a growing number of ENT specialist head and neck nurses, who may also be able to provide counselling

support if given the appropriate training. On the basis of our study findings, we recommend that at least one member of the MDT ought to be trained to identify patients suffering from psychological distress and to refer them to the appropriate existing psychiatric services. Some larger centres may consider employing a counsellor or a community psychiatric nurse to augment their services. In our own unit, we discussed the possibility of psychiatrists becoming members of the cancer MDT services, and they were keen to be involved, especially after reviewing our results. However, due to time and budgetary constraints, this was perceived as unrealistic at the present time. This would however represent the best possible care for our patients.

- **Out-patients are known to suffer psychological distress; this is particularly acute for cancer patients**
- **This study aimed to quantify the distress felt by head and neck clinic out-patients**
- **A significant proportion of out-patients suffered anxiety and depressive symptoms**
- **These patients may benefit from psychological support within the head and neck multidisciplinary team**

Obviously, more research and evidence is needed to definitively verify that providing these services would significantly improve patient care. We intend to secure funding to undertake a controlled clinical trial, in order to substantiate our current study findings and to generate further evidence to support the development of holistic care for our patients. At the very least, we hope to highlight the psychological stress that many patients endure when accessing hospital services.

Conclusion

Most doctors are aware of the psychological distress their patients are under. However, rather than accepting this as 'natural' or 'to be expected under the circumstances', clinicians should have a low threshold for acting upon these issues. If 50 per cent of patients do indeed experience psychological distress in head and neck clinics, addressing this within the clinic would significantly increase the staff workload. Understandably, these issues are currently not perceived to be under the direct remit of head and neck cancer services, and are typically

delegated to the general practitioner or oncologist for a more holistic approach. However, we recommend that another member of the head and neck MDT, with more time to dedicate to distressed patients, should be employed to psychologically assess patients, and to treat or refer if necessary. This must result in better patient care outcomes.

References

- 1 Trzcieniecka-Green A, Bargiel-Matusiewicz K, Borczyk J. Quality of life of patients after laryngectomy. *J Physiol Pharmacol* 2007;**58**(suppl 5):699–704
- 2 Scalzi CC, Burke L, Greenland S. Evaluation of an inpatient educational program for coronary patients and families. *Heart Lung* 1980;**9**:846–53
- 3 Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. *Acta Psychiatr Scand* 1983;**67**:361–70
- 4 Bjelland I, Dahl AA, Haug TT, Neckelmann D. The validity of the Hospital Anxiety and Depression Scale An updated literature review. *J Psychosom Res* 2002;**52**:69–77
- 5 Zöger S, Svedlund J, Holgers KM. The Hospital Anxiety and Depression Scale (HAD) as a screening instrument in tinnitus evaluation. *Int J Audiol* 2004;**43**:458–64
- 6 Söderman AC, Bagger-Sjöbäck D, Bergenius J, Langius A. Factors influencing quality of life in patients with Ménière's disease, identified by a multidimensional approach. *Otol Neurotol* 2002;**23**:941–8
- 7 Chen AM, Jennelle R, Grady V, Tovar A, Bowen K, Simonin P *et al*. Prospective study of psychosocial distress among patients undergoing radiotherapy for head and neck cancer. *Int J Radiat Oncol Biol Phys* 2008;**70**:1219–28
- 8 Siupsinskiene N, Vaitkus S, Grebliauskaite M, Engelmanaite L, Sumskiene J. Quality of life and voice in patients treated for early laryngeal cancer. *Medicina (Kaunas)* 2008;**44**:288–95
- 9 Archer J, Hutchison I, Korszun A. Mood and malignancy: head and neck cancer and depression. *J Oral Pathol Med* 2008;**37**:255–70
- 10 Milo KM. The relationship between depression and cancer survival. *Med Health R I* 2003;**86**:249–50
- 11 Spiegel D, Bloom JR, Kraemer HC, Gotthel E. Effect of psychosocial treatment on survival of patients with metastatic breast cancer. *Lancet* 1989;**ii**:888–91
- 12 Sharpe M, Strong V, Allen K, Rush R, Postma K, Tulloh A *et al*. Major depression in outpatients attending a regional cancer centre: screening and unmet treatment needs. *Br J Cancer* 2004;**90**:314–20

Address for correspondence:

Mr Vikrant Veer,
67 Elsdon Road, Gosforth,
Newcastle NE2 1HY, UK.

Fax: +44 (0)1642 854029

E-mail: vikveer@gmail.com

Mr V Veer takes responsibility for the integrity of the content of the paper.

Competing interests: None declared
