

Detection of Anxiety and Depression in Cancer Patients

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Abstract

In this study, the Hospital Anxiety and Depression Scale has been adapted to suit Indian cancer patients to obtain the optimal scores which would suggest the likelihood of psychiatric disorder. Consecutive cancer patients were included and a standard clinical psychiatric interview was conducted to make a psychiatric diagnosis in accordance with the DSM-III R. All the patients were administered the Hospital Anxiety and Depression Scale (HADS). Specificity and Sensitivity were computed for different cut-off scores for the HADS subscales as well as the total HADS scores. The cut-off scores of 7 on the anxiety subscale gave the sensitivity and specificity values of 87% and 79% respectively, whereas a cut-off score of 8 on depression subscale gave the sensitivity and specificity values of 75% and 76% respectively and these seem to be optimal. The specificity and sensitivity values of the total scores at cut-off scores of 16 and 17 gave good values of sensitivity and specificity, as 85% and 88%, and 82% and 91% respectively. At present, like in other countries, HADS seems to be the best screening instrument for Indian cancer patients, for simple and rapid evaluation of psychological morbidity and interventions with cancer patients.

Key words -

**Screening,
Anxiety,
Depression,
Cancer patients**

Anxiety and depression are the commonest psychiatric problems encountered in cancer patients. The prevalence of depression in cancer patients ranges from 4.5% to 58% [1], [2]. Anxiety disorders have also been detected in cancer patients, however, there is often a high correlation between depression and anxiety in patients with cancer [3]. Other psychiatric disorders, like psychosis, are less frequently encountered [4]. It has been repeatedly acknowledged that the majority of psychiatric disorders in cancer patients have not been detected, diagnosed or treated [5]. Physicians treating cancer patients are faced with the task of differentiating normal, psychological responses from signs and symptoms of a psychiatric disorder [6]. In the busy outpatient clinics and overcrowded wards in most of our hospitals, the physicians, surgeons and other therapies of cancer patients are overburdened with looking after the physical side of cancer and its treatment. Liaison services from psychiatric departments in such hospitals are an exception, and exist only in a few centres. In such circumstances, a brief screening rating scale can be of great use.

There are a number of questionnaires and rating scales used for screening for psychiatric disorders, but those are difficult to interpret because they include somatic symptoms that may be attributable to the cancer, its treatment or psychological reaction. The Hospital Anxiety and Depression Scale (HADS) has been used in a number of cancer centres for screening of psychiatric morbidity in cancer patients. It is a brief, self administered rating scale, specifically designed for patients with medical illness [7]. It consists of 14 items; seven for anxiety and seven for depression and has no physical or somatic symptoms. In this study, we have adapted the Hospital Anxiety and Depression Scale to suit Indian cancer patients and derived the scores which would suggest the likelihood of psychiatric disorder.

Material and Methods

Consecutive cancer patients were recruited irrespective of their age, sex, background and site of malignancy. A standard clinical psychiatric interview was conducted which allowed a psychiatric diagnosis to be made in accordance with the Diagnostic & Statistical Manual, DSM-III R [8]. All the patients were administered the Hospital Anxiety and Depression Scale (HADS). For subjects who could not read or understand the questionnaires, due to educational or any other reasons, the items of the questionnaires were read out clearly and the options for rating given. Their responses were noted. The HADS was translated into Kannada for those patients who could not read English, but could read Kannada. The reliability of the Kannada translation was confirmed by back translation into English. The HADS scores were computed for the anxiety and depression subscales as well as the total scale score. Patients were identified as psychiatric cases (Depressive disorder and Anxiety disorder) if they met the DSM-III-R criteria [8]. Specificity and Sensitivity were computed for different cut-off scores for the HADS subscales as well as the total HADS scores.

Results

There were seventy subjects, whose age ranged from 18 to 78 years, 43% males and 57% females. Table I gives the range, mean, standard deviation, median and mode of both the subscales and the total scale scores. Table II gives the sensitivity and specificity values of the anxiety and depression scales. The cut-off score of 7 on the anxiety subscale gives the sensitivity and specificity values of 87% and 79% respectively, whereas a cut-off score of 8 on depression subscale gives the sensitivity and specificity values of 75% and 76% respectively and these seem to be the best as compared to the other cut-off scores. A cut-off score of 8 on anxiety subscale reduces the sensitivity markedly with a marginal improvement in specificity. On the other hand, there is little change in sensitivity if the cut-off score for depression subscale is reduced to 7, but the specificity value falls to 68%.

Table I - Scores of HADS scale

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Table II - Sensitivity and specificity values of subscales

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The specificity and sensitivity values of the total scale score is given in Table III. Cut-off scores of 16 and 17 give good values of sensitivity and specificity, as 85% and 88%; and 82% and 91%

respectively. Table IV shows that there are significant differences between the subscales and total score between the cases and the non-cases. The hits positive rates for the anxiety and depression subscales and the total scale score were derived and found to be 0.73, 0.76 and 0.82 respectively.

Table III - Sensitivity and specificity of total scale score

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Table IV - Comparisons of HADS scores between cases and non-cases

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Regarding psychiatric status, 27 subjects were identified as anxiety disorder and depressive disorder, on the basis of the standard clinical psychiatric interview, according to the DSM II R. The other 43 subjects did not fulfill the criteria for psychiatric caseness.

Discussion

This is the first Indian population of cancer patients screened with the HADS. Three studies have used HADS to screen patients with cancers in Belgium [9], Great Britain [10], and North America [6]. Earlier, Ibbotson et al [11] confirmed the validity of the HADS as a screening instrument for psychological distress in cancer patients.

Our experience during this study with HADS showed that it was a easily administered, brief screening instrument. The cut-off scores with adequate sensitivity and specificity were documented by our study, and the cut-off scores of 7 (or 8) and 8 on anxiety and depression subscales respectively, and total score of 16 give good sensitivity and specificity values. The cut-off score of 8 for anxiety and depression were used by Carroll et al [6] to identify cases who needed further psychiatric evaluation. Our cut-off scores are also similar to those recommended by Zigmond and Snaith [7], who devised the HADS, and has been used by most other studies. However, Razavi et al [9] found the optimal cut-off score of 19 for total scale score to diagnose major depression and a total scale score of 13 to detect adjustment disorders. HADS has been used as a unidimensional (i.e total scores only) model [9] as well as a bidimensional (anxiety and depression subscales) model [10]. We have derived optimal cut-off for both the subscales, as well as the total scale, which provide an appreciable hits positive rate. Further experience with the use of HADS would be necessary to realise the advantages and disadvantages of both methods. At present, like in other countries, HADS seems to be the best screening instrument for Indian cancer patients, for simple and rapid evaluation of psychological morbidity and interventions with cancer patients. The HAD scale has already established adequate psychometric properties, high internal consistency and reliable factor structure [10], [11]. The purpose of devising the scale was to provide clinicians with a distinction between the constructs of anxiety and depression and not to provide a screen for general emotional disorders like other existing screening instruments (Snaith, Personal communication, 1993). Our results confirm that the HADS is a useful instrument for measuring anxiety and depression in cancer patients using either the subscale scores or the total score or both.

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1.Lansky S B, List M A, Herman C A et al, Absence of major depressive disorder in female cancer patients

J Clin Oncol Page: 3: 1552-1560, 1985

2.Massie M J & Holland J C, Depression and the cancer patient

Journal of Clinical Psychiatry Page: 75: 12-17, 1990

3.Cassileth B R, Lush E J, Hutter R, Strouse T B & Brown L I, Concordance of depression and anxiety in patients with cancer

Psychol Rep Page: 54: 588-590, 1984

4.Chaturvedi S K & Upadhyaya M P, Psychological problems in a psychiatric clinic

Paper presented at the III biennial Conference of the Indian Society of Oncology, Bangalore Scientific

Page: p 90, 1988

5.Derogatis L R, Marrow G R, Fetting J et al, The prevalence of psychiatric disorders among cancer patients

JAMA Page: 249: 751-757, 1983

6.Carroll B T, Kathol R C, Noyes R, Wald T G & Clamon G E, Screening for depression and anxiety in cancer patients using the hospital anxiety and depression scale

General Hospital Psychiatry Page: 15: 69-74, 1993

7.Zigmond A S & Snaith R P, The hospital anxiety and depression scale

Acta Psychiatrica Scandinavica Page: 76: 361-370, 1983

8.American Psychiatric Association, *Diagnostic and Statistical Manual, DSM, 3rd edition Revised, APA, Washington D C*1987

9.Razavi D, Defvaux N, Farvacques C & Robay E, Screening for adjustment disorders and major depressive disorders in cancer in patients

British Journal of Psychiatry Page: 156: 79-83, 1990

10.Moorey S, Greer S, Watson M et al, The factor structure and factor stability of the hospital anxiety and depression scale in patients with cancer

British Journal of Psychiatry Page: 158: 79-83, 1990

11.Ibbotson T, Maguire P, Selby P et al, Validating self rating questionnaires

*Paper Presented at the Annual Conference of the British Psychological Oncology Group, London*1989
