Diagnosis of Depression in Patients Receiving Specialist Community Palliative Care: Does Using a Single Screening Question Identify Depression Otherwise Diagnosed by Clinical Interview?

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Abstract

Background: Depression affects a quarter of palliative patients and is associated with reduced quality of life. Screening for psychological problems at key points in the patients' pathway is recommended but there is no consensus as to how to do this.

Aims: The study's aim was to assess the efficacy of a screening question for depression against a semistructured interview in patients referred to a specialist community palliative care team.

Methods: Fifty community palliative care patients were assessed using a single question: "Have you felt depressed, most of the day, nearly every day for two or more weeks?" Results were compared with assessment using the validated Mini International Neuropsychiatric Interview (MINI).

Results: Sensitivity of the single question was 0.8 and specificity was 0.85. The positive predictive value was 0.57 and the negative predictive value was 0.94.

Conclusion: The screening question was shown to have acceptable sensitivity and specificity in a small sample of community palliative care patients. It is likely to be most useful to accurately identify those who are not depressed and identify those patients who need a more in-depth assessment of their mood.

Introduction

DEPRESSION AFFECTS approximately one quarter of palliative care patients and is associated with reduced quality of life.¹ The National Institute for Health and Clinical Excellence (NICE) in the United Kingdom recommends that patients with cancer should be systematically screened for psychological problems at key points in their pathway.² In doing so the aim is to identify and address any psychological issues in order to improve overall quality of life for the patient.

However there is no consensus on how best to screen for depression in patients receiving palliative care.^{3,4} It can be difficult to use lengthy questionnaires in such a frail population. In a study of hospice inpatients using the Hospital Anxiety and Depression Scale (HADS)⁵ only 54% of patients completed the questionnaire; 29% were too unwell, 10%

had cognitive impairment which prevented completion, 4% declined, and 2% could not complete due to language or communication issues. Other studies assessing different questionnaires to identify depression in palliative inpatients or day hospice patients have encountered similar problems with low completion due to patient frailty or refusal to complete the questionnaire.^{6,7}

Shorter screening tools have been suggested as a means of avoiding the limitations of frailty and length of assessment which impact upon the completion rates of longer questionnaires.⁴ The sensitivity and specificity of different screening tools for depression in palliative care range from 0.72 to 1.0, and 0.50 to 1.0, respectively.³ Chochinov and colleagues⁸ found that a single screening question, "Have you felt depressed most of the day, nearly every day, for two or more weeks?" correctly identified the diagnosis of major depression

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in 197 terminally ill patients compared to a diagnostic interview (sensitivity and specificity 1.0). The addition of a second question, "Have you lost interest or pleasure in all or most activities," reduced the specificity to 0.98 but not the sensitivity. A similar study in the United Kingdom⁶ found a different single question ("Are you depressed?") to have a sensitivity of 0.55 and specificity of 0.74. Payne and colleagues⁷ using a different two-item questionnaire ("Are you depressed?" and "Have you experienced loss of interest in things or activities that you would normally enjoy?") found a sensitivity of 0.91 and specificity of 0.68. The difference in sensitivity and specificity between the studies may be due to the wording of the questions asked.

Referral to specialist community palliative care is an ideal opportunity to screen for psychological problems including depression. However, no studies have been identified that assess patients' mood at this point. Such patients may be less frail and have a longer prognosis than hospice inpatients and therefore are more suitable for screening. It is hoped that identification of depression in such patients will lead to improved treatment and quality of life.

The aim of this study was to assess the efficacy of a screening question for depression as used by Chochinov⁸ against a short semistructured interview in patients referred to a specialist community palliative care team.

Method

All patients over 18 years of age with advanced progressive illness first assessed by a specialist community palliative care team in Leeds, United Kingdom, between March 2010 and February 2011, were considered for participation in the study.

As part of the initial psychosocial assessment patients were routinely asked, "Have you felt depressed most of the day, nearly every day, for two or more weeks?" by community palliative care nurse specialists. The outcome of this was documented in the patients' notes and unknown to the research team. Patients were given an information leaflet about the study, and consenting patients were visited at home between 24 hours and 14 days after the initial assessment. Patients were administered an abbreviated mental test score (AMTS), a validated ten-point screening tool for cognitive impairment developed for use in clinical settings in which a score of 7 or below suggests cognitive impairment.^{9,10} A validated semistructured diagnostic interview for depression: The Mini International Neuropsychiatric Interview¹¹ (MINI) was also administered. The MINI is a validated brief structured diagnostic psychiatric interview based on DSM-IV and ICD-10 criteria. It was developed for use in multicenter clinical trials and epidemiology studies and takes approximately 15 minutes to complete, significantly shorter than other similar validated instruments, making it most suited to the palliative population. Patients who scored 7 or less on the AMTS were excluded, as their cognitive impairment may have impacted on their ability to complete the MINI. Patients who were assessed by the research team more than 14 days after being asked the initial question were excluded from the study, as their mood may have significantly altered over two weeks.

Sensitivity, specificity, positive predictive value, and negative predictive value of the single question were calculated.

The study was approved by the York NHS research ethics committee.

Results

One hundred and twenty patients were given an information leaflet about the study and 57 agreed to take part. Six patients were unable to be interviewed within 14 days of being asked the single question and were excluded. One patient scored less than 7 on the AMTS and was excluded. Fifty patients, 24 women and 26 men, with a median age of 71 years (range 49–84 years) were included. Forty-nine patients had malignant disease and one patient had advanced chronic obstructive pulmonary disease. The most common diagnoses were prostate cancer (nine patients), lung cancer (nine patients), upper gastrointestinal cancer including pancreas (eight patients), and lower gastrointestinal cancer (seven patients). Ten patients had depression diagnosed by the MINI and 14 patients answered yes to the single question (see Table 1). The prevalence of major depressive disorder based on the MINI was 20%.

The sensitivity of the screening question was calculated to be 0.80 (0.44 to 0.97) and the specificity to be 0.85 (0.7 to 0.94). The positive predictive value (PPV) was 0.57 (0.29 to 0.82) and the negative predictive value (NPV) was 0.94 (0.81 to 0.99).

Discussion

Depression in palliative care patients can often remain undetected by clinicians despite its significant impact on quality of life. The prevalence of major depressive disorder based on the MINI in this study was 20%, which is within the range found in previous studies (6% to 32%).¹

Screening questions for depression have been found to have variable sensitivity and specificity in palliative care. Chochinov⁸ showed that a specific single question, "Have you felt depressed most of the day, nearly every day for two or more weeks?" in North American palliative care inpatients had a sensitivity and specificity of 1.0 and was therefore diagnostic for depression. However, Lloyd-Williams and colleagues showed that the shorter question "Are you depressed?" had a lower sensitivity and specificity in palliative day care patients in the United Kingdom (sensitivity 0.55 and specificity 0.74).⁶ Our study showed that within community palliative care patients the single question has a high specificity of 0.85 (0.7 to 0.94) and a low false negative rate (NPV 0.94, 0.81 to 0.99), thus is most helpful at screening out those patients who are not depressed and therefore do not need more in-depth assessment of their mood.

Although the question accurately identified those who are suffering a major depressive episode with an acceptable sensitivity (0.8, 0.44 to 0.97), the wide confidence intervals and the low PPV (0.57, 0.29 to 0.82) means that patients identified as possibly depressed by the single question need further

TABLE 1. THE NUMBER OF PATIENTS ANSWERING YES/NO TO THE SINGLE QUESTION AND THE RESULTS OF THE MINI

	<i>"Have you felt depressed most of the day, every day, for two or more weeks?"</i>	
	Yes	No
MINI depressed	8	2
MINI not depressed	6	34

MINI, Mini International Neuropsychiatric Interview.

assessment of their mood before being commenced on treatment. The wide confidence intervals for the sensitivity and PPV are mostly likely due to the small sample size, but further study of the question in a larger group of patients is needed.

There is a notable drop in sensitivity, specificity, and PPV of the single question in our study compared to the study by Chochinov⁸ in which the same question was used. This could be due to cultural differences between North America and Europe such as the acceptability of answering yes to a question about mood. It is also possible that the difference is due to the different diagnostic interview that the screening tool was compared to. The MINI used in this study was developed to identify DSM-IV and ICD-10 psychiatric disorders, and may therefore be more valid to identify major and minor depressive episodes than the adapted Schedule for Affective Disorders and Schizophrenia, according to research diagnostic criteria used by Chochinov and colleagues.⁸ However, the most likely cause is the timing of the question in relation to the 'gold standard' interview. Chochinov and colleagues extracted the answer to the 'single question' from within the diagnostic interview and compared it with the remainder of the interview rather than administering the screening question separately, thus not actually screening. Our screening question was administered as part of a clinical assessment with a diagnostic interview completed any time between 1 and 14 days later, thus is more reflective of screening in everyday clinical practice.

Assessing patients for depression while at home, when they may be undergoing their first contact with specialist palliative care services and may be at an earlier stage of their illness, gives more scope for patients to be able to complete the assessment, for appropriate management to be delivered, and ultimately for the benefits of assessment and management to be felt by patients. Approximately half of patients (47%) approached to take part in the study agreed, which may reflect the fact that our patients were still living at home and may have had conflicting schedules or concerns about having a research team visit them. However, other studies assessing screening tools in palliative care have had similar problems recruiting and this seems to be dependent on a setting with 23% of patients in a specialist palliative care inpatient unit⁷ and 70% in a day hospice⁶ agreeing to take part. The patients were representative, in terms of age and diagnosis, of those referred to the local community team and to national palliative care services.¹² However, it is possible that due to the small sample size, the study underestimates the prevalence of depression and hence the sensitivity and specificity of the single question.

Conclusion

Within a small sample of community palliative care patients the specific single question "Have you felt depressed most of the day, nearly every day, for two or more weeks?" appears to be a useful screening tool for depression. This study has shown that the question is likely to be most useful to accurately identify those who are not depressed and therefore do not need treatment, and identify those patients who need a

more in-depth assessment of their mood. Further study of the specific single question used by Chochinov⁸ and in this study is needed within different palliative care settings.

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