The Edmonton Symptom Assessment System (ESAS): A Simple Method for the Assessment of Palliative Care Patients

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Abstract / We describe a simple method for the assessment of symptoms twice a day in patients admitted to a palliative care unit. Eight visual analog scales (VAS) 0–100 mm are completed either by the patient alone, by the patient with nurse’s assistance, or by the nurses or relatives at 10:00 and 18:00 hours, in order to indicate the levels of pain, activity, nausea, depression, anxiety, drowsiness, appetite, and sensation of well-being. The information is then transferred to a graph that contains the assessments of up to 21 days on each page. The sum of the scores for all symptoms is defined as the symptom distress score. The Edmonton Symptom Assessment System (ESAS) was carried out for 101 consecutive patients for the length of their admission to our unit. Of these, 84% were able to make their own assessment sometime during their admission. However, before death 83% of assessments were completed by a nurse or relative. Mean symptom distress score was 410±95 during day 1 of the admission, versus 362±83 during day 5 (p<0.01). Mean symptom distress scores throughout the hospitalization were 359±105, 374±93, 359±91 and 406±81 when the ESAS was completed by the patient alone, patient with nurse’s assistance (p=N.S.), nurse alone (p=N.S.), or relative (p<0.01) respectively. We conclude that this is a simple and useful method for the regular assessment of symptom distress in the palliative care setting.

Résumé / Cet article décrit une méthode facile pour évaluer les symptômes chez les patients admis dans une unité de soins palliatifs. Il s’agit pour le patient, seul ou avec l’aide de l’infirmière ou d’un proche, de compléter des échelles visuelles analogues deux fois par jour, à 10h00 et à 18h00, et ce, afin d’indiquer ses niveaux de douleur, de nausée, d’anxiété, de somnolence, d’appétit, de dépression, d’énergie et de sensation de bien-être. L’information recueillie est ensuite transférée sur un graphique, lequel peut inclure 21 jours par page. La somme totale de tous les symptômes évalués se définit comme le score de détresse symptomatique. Le Edmonton Symptom Assessment System (ESAS) a ainsi été administré à 101 patients consécutifs pour la durée de leur hospitalisation à l’unité. Les patients ont été en mesure de compléter l’évaluation seuls dans 84% des cas à un moment ou l’autre durant leur séjour. Cependant, à l’approche de la mort, 83% des évaluations ont été complétées par une infirmière ou un parent. Le score de détresse symptomatique était de 410±95 au premier jour de l’hospitalisation versus 362±83 au cinquième jour (p<0.01). Le score de détresse symptomatique durant le séjour était de 359±105 lorsque le ESAS était complété par le patient lui-même, 374±93 lorsque complété par le patient aidé d’une infirmière (p=N.S.), 359±91 lorsque complété par l’infirmière seule (p=N.S.) et 406±81 lorsque complété par un parent (p<0.01). En conclusion, le ESAS s’avère une méthode simple et pratique pour l’évaluation des patients en soins palliatifs et peut être effectué de façon répétitive durant le séjour, même pour une population très malade.

INTRODUCTION

The proper assessment and management of physical and psychological distress is one of the main components of adequate palliative care (4,5,8,13). Because of the subjective nature of these symptoms, the “gold standard” is the patient’s own assessment of their intensity (1,4–6,8,11,13). Several excellent systems for the assessment of symptoms have been described (1–3,6–8,10,11). However, some of these systems are time-consuming and may be expensive and exhausting for very debilitated patients. Other systems such as the visual analog scale (VAS) are simple and effective (6,7,9). However, most
papers only mention these methods within the context of clinical research trials. This report describes our experience with the daily use of a system based on the ESAS for symptom assessment in a palliative care unit.

PATIENTS AND METHODS

One hundred and one consecutive patients admitted to the Palliative Care Unit, Edmonton General Hospital, were assessed using the ESAS. Patient characteristics are summarized in Table 1.

Table 1 / PATIENT CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>101</td>
</tr>
<tr>
<td>Sex (female/male)</td>
<td>57/44</td>
</tr>
<tr>
<td>Mean Age (years)</td>
<td>65±13</td>
</tr>
<tr>
<td>Mean length of stay (days)</td>
<td>34±36</td>
</tr>
<tr>
<td>Primary Tumor:</td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>15</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>20</td>
</tr>
<tr>
<td>Lung</td>
<td>30</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>23</td>
</tr>
<tr>
<td>Hematological</td>
<td>3</td>
</tr>
<tr>
<td>Melanoma</td>
<td>3</td>
</tr>
<tr>
<td>Head and neck</td>
<td>6</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
</tr>
</tbody>
</table>

The ESAS consists of eight 100 mm visual analog scales for pain, activity, nausea, depression, anxiety, drowsiness, appetite, and sensation of well-being. A newer version includes a ninth VAS for shortness of breath (Fig. 1). Results in this report refer to the older, eight-item ESAS. In addition, one extra empty VAS is left for the assessment of a less frequent symptom that might be important for a given patient, such as hiccups, pruritus, vertigo, or confusion. When such an extra symptom is identified, patients are also assessed twice a day for the intensity of this symptom. The information is then transferred to a symptom assessment graph (Fig. 2) that records the assessments of up to 21 days on one page.

Patients were assessed every day at 10:00 and 18:00 hours. The assessments were completed either by the patient unassisted, the patient assisted by a nurse, the nurse, or a relative. The decision as to who would be in charge of the assessment was made by the nursing team leader each morning. Whenever possible, patients were expected to do their own symptom assessment either alone or assisted by the nursing staff. When patients were severely confused, sedated, or refused to do their own assessments, the nurse would complete the VAS according to her judgement of the status of the different symptoms.

Figure 1. Visual Analog Scale

Figure 2. Symptom Assessment Graph
When it was impossible to assess a certain symptom (e.g., anxiety or depression in a comatose patient), the VAS for that symptom would not be completed. If relatives were available most of the day and were willing, they were asked to complete the VAS when patients were not able.

Because of the descriptive nature of this report, results are expressed as the mean and standard deviation in the case of continuous variables and as a percentage in the case of proportions. Statistical analysis was performed using the chi-square test for the comparison of proportions and Student's t-test for continuous variables, according to the Statistical Package for the Social Sciences (12).

RESULTS

A total of 6352 assessments were carried out during 3352 patient days for 101 patients. Of these, 85 were able to complete their VAS either alone or assisted by the nurse upon admission (84%). As their disease progressed, 84/101 patients could not complete their form, and it was completed by the nurse in 96% of cases and by a relative in 4%. No instance did a patient permanently refuse to complete the form. Occasionally, patients refused to complete the form on a given day because of tiredness or severe symptoms. In that event, the nurse would complete the form for that day and the patient would restart the following day.

By adding the scores of the different variables, we determined the symptom distress score. The highest potential value was 100 mm for each of the eight variables, for a total of 800. Table 2 summarizes the symptom distress scores for the first five days of admission of our patients.

Results for day 5 were significantly lower than for day 1. Mean ESAS scores during hospitalization were 359±105, 374±93, 359±91, and 406±81 when the ESAS was completed by the patient alone, patient with nurse's assistance (p=N.S.), nurse alone (p=N.S.), or relative (p<0.01) respectively.

DISCUSSION

In this open prospective study we used a simple method for the assessment of different symptoms in patients admitted to a palliative care unit. Because of the extremely debilitated and symptomatic status of our patients, the system needed to be very simple and require minimal effort and concentration from the patient.

Because our unit is the only inpatient facility for northern Alberta, we have strict criteria for admission of patients. In all cases, severe symptom distress that cannot be controlled by the primary treating physician is required for admission to the unit. This high level of symptom distress is shown in Table 2. Table 2 indicates that a significant improvement in symptom distress occurred during the first five days of admission, probably as a result of both symptomatic interventions by the medical and nursing staff and adjustment by the patients to the unit.

The ESAS has a number of advantages as compared to traditional physician and nursing notes. Patients are able to report directly the intensity of their symptoms onto the chart. The need to complete the forms ensures a complete patient assessment twice daily. The form also provides for a graphic display of symptoms that can be used by different members of the staff. This is particularly important when patients are treated by different physicians or nurses during their stay in the hospital. Among the disadvantages of this method are occasional patient dislike of the instrument, the need to clearly explain to the patient the purpose of the form and how to complete it, and the occasional reluctance of newer members of the staff to make these assessments.

Appropriate assessment of different symptoms is paramount in the proper practice of palliative care (4,5,8,12). The VAS has been validated as a useful tool for the assessment of different physical and psychological symptoms (2,3,6,7,9). We believe that the ESAS not only has helped us to manage our patients better on a daily basis, but has also helped us to gain a significantly better knowledge of the epidemiology of symptom distress in cancer patients. Hopefully it will be useful in comparing the characteristics of patients treated in different institutions. Because of the high prevalence of dyspnea in terminal cancer, the new version of our assessment form includes a "shortness of breath" evaluation for all patients.
Adding this score will raise the potential maximum for the symptom distress score to 900.

We conclude that the ESAS is a simple and useful method for the assessment of palliative care patients. It can be done repeatedly during hospitalization, even in this very ill population.

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REFERENCES