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Clinical Update: Literature Abstracts

MEASURES

Validation of a Modified Rotterdam Symptom Checklist for Use with Cancer Patients in the United States

Stein, K., Denniston, M., Baker, F., Dent, M., Hann, M., Bushhouse, S., and West, M.

Journal of Pain and Symptom Management, *26* (2003), 975–989

The Rotterdam Symptom Checklist (RSCL) is a well-known instrument for the assessment of symptom-related distress among cancer patients. Despite its broad application, the utility of the RSCL with cancers patients is hindered by the omission of several important physical symptoms and methodological limitations of previous validation studies. The aims of the present study were to modify the RSCL through the addition of several physical symptoms and to subsequently validate the modified version of the Rotterdam Symptom Checklist (RSCL-M) with a heterogeneous sample of cancer patients from the United States. A total of 1,005 male and female cancer patients from two Midwestern states completed the RSCL-M and several other self-report instruments. Results indicated that the RSCL-M is a reliable and valid instrument for use with cancer patients in the United States and is sensitive to differences in physical distress across groups expected to have distinct symptom-related distress profiles.

Evaluation of a Data Collection Tool (TELE-*form*®) for Palliative Care Research

Quan, K., Vigano, A., and Fainsinger, R.

Journal of Palliative Medicine, *6* (2003), 401–408

The Alberta Cancer Board Palliative Care Research Initiative (ACBPCRI) encourages province-wide collaboration on palliative care research projects. Because of geographic differences in information system infrastructure, it is necessary to evaluate and adopt a data collection tool that will span the variability in system hardware and software. We assessed TELEform® (Cardiff Sofware Inc., Vista, CA), an optical recognition-based technology that scans data collection paper forms and exports data to a computer database. We examined work place suitability, data quality, and effective resource utilization (time and cost) during the data collection tool evaluation. Two hospices and two hospitals from the cities of Edmonton and Calgary participated in the revised Edmonton Staging System (rESS) project that used TELEform as its data collection tool. The evaluation was conducted over a period of 7 months. Data source such as e-mail and summary notes collected primarily through meetings and discussions with management, caregivers, researchers, and clerical staff was used to assess work practice and resource utilization. Descriptive statistics were employed to examine data quality and resource utilization. One hundred seventy-eight patients were recruited during the 7-month trial. The costs and time involved in staff training, logistic support, and equipment startup were found to be reasonable. Data error and missing data were 0.4% and 0.6%, respectively. We initially encountered several problems with TELEform. The optical recognition tool could not easily pick up handwritten data. Furthermore, it was unforgiving in the sense that an error was not correctable by an eraser on the paper form. Data collectors found TELEform usage to be easy and simple because it retained the familiarity of paper-based recording. It is important to develop an information infrastructure to support research project data collection for different health settings across health regions. The TELEform based on optical recognition was able to respond to the need for current information processing. We believe that TELEform is a useful tool in terms of work practice, data quality, and resource utilization.

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Care for the Caregivers: A Review of Self-Report Instruments Developed to Measure the Burden, Needs, and Quality of Life of Informal Caregivers

Deeken, J., Taylor, K., Mangan, P., Yabroff, K.R., and Ingham, J.

Journal of Pain and Symptom Management, *26* (2003), 922–953

Significant demands are being placed on the informal caregivers of chronically ill patients, including those suffering from cancer. Health care professionals need to be aware of these demands, and they need effective tools to assess the impact these demands place on the caregivers. Over the past 25 years, researchers have developed self-report instruments to assess informal caregivers. These instruments assess various aspects of the caregiving experience, including caregiver burden, needs, and quality of life. The purpose of this review was to identify and critically evaluate these instruments. MEDLINE and PUBMED were searched from 1966 to 2002. After an extensive literature search and review and utilizing specific inclusion criteria, 28 instruments were identified and evaluated in terms of their development, content, and psychometric properties. In addition, a history of the construct and measurement development in the areas of caregiver burden, needs, and quality of life are discussed. Although some further development and refinement of instruments could benefit the field, depending on the questions researchers or clinicians seek to pursue, there are many proven tools available for their use. Future research needs to use these instruments to assess the effectiveness of interventions aimed at improving the care of the caregivers.

SYMPTOM CONTROL

Fluoxetine versus Placebo in Advanced Cancer Outpatients: A Double-Blinded Trial of the Hoosier Oncology Group

Fisch, M., Loehrer, P., Kristeller, J., Passik, S.D., Jung, S., Shen, J., Arquette, M., Brames, M., and Einhorn, L.

Journal of Clinical Oncology, *21* (2003), 1937–1943

The purpose of this study was to determine whether fluoxetine improves overall quality of life (QOL) in advanced cancer patients with symptoms of depression revealed by a simple survey.

One hundred sixty-three patients with an advanced solid tumor and expected survival between 3 and 24 months were randomly assigned in a double-blinded fashion to receive either fluoxetine (20 mg daily) or placebo for 12 weeks. Patients were screened for at least minimal depressive symptoms and assessed every 3 to 6 weeks for QOL and depression. Patients with recent exposure to antidepressants were excluded.

The groups were comparable at baseline in terms of age, sex, disease distribution, performance status, and level of depressive symptoms. One hundred twenty-nine patients (79%) completed at least one follow-up assessment. Analysis using generalized estimating equation modeling revealed that patients treated with fluoxetine exhibited a significant improvement in QOL as shown by the Functional Assessment of Cancer Therapy–General, compared with patients given placebo ($p = 0.01$). Specifically, the level of depressive symptoms expressed was lower in patients treated with fluoxetine ($p = 0.0005$), and the subgroup of patients showing higher levels of depressive symptoms on the two-question screening survey were the most likely to benefit from treatment. In this mix of patients with advanced cancer who had symptoms of depression as determined by a two-question bedside survey, use of fluoxetine was well tolerated, overall QOL was improved, and depressive symptoms were reduced.

Active Tamoxifen Metabolite Plasma Concentrations after Coadministration of Tamoxifen and the Selective Serotonin Reuptake Inhibitor Paroxetine

Stearns, V., Johnson, M., Rae, J., Morocho, A., Novielli, A., Bhargava, P., Hayes, D., Desta, Z., and Flockhart, D.

Journal of the National Cancer Institute, *95* (2003), 1758–1764

Tamoxifen, a selective estrogen receptor modulator (SERM), is converted to 4-hydroxy-tamoxifen and other active metabolites by cytochrome P450 (CYP) enzymes. Selective serotonin reuptake inhibitors (SSRIs), which are often prescribed to alleviate tamoxifen-associated hot flashes, can inhibit CYPs. In a prospective clinical trial, we tested the effects of coadministration of tamoxifen and the SSRI paroxetine, an inhibitor of CYP2D6, on tamoxifen metabolism. Tamoxifen and its metabolites were measured in the plasma of 12 women of known CYP2D6 genotype with breast cancer who were

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taking adjuvant tamoxifen before and after 4 weeks of coadministered paroxetine. We assessed the inhibitory activity of pure tamoxifen metabolites in an estradiol-stimulated MCF7 cell proliferation assay. To determine which CYP isoforms were involved in the metabolism of tamoxifen to specific metabolites, we used CYP isoform-specific inhibitors. All statistical tests were two-sided. We separated, purified, and identified the metabolite 4-hydroxy-N-desmethyl-tamoxifen, which we named endoxifen. Plasma concentrations of endoxifen statistically significantly decreased from a mean of 12.4 ng/mL before paroxetine coadministration to 5.5 ng/mL afterward (difference = 6.9 ng/mL, 95% confidence interval [CI] = 2.7 to 11.2 ng/mL; p = 0.004). Endoxifen concentrations decreased by 64% (95% CI = 39% to 89%) in women with a wild-type CYP2D6 genotype but by only 24% (95% CI = 23% to 71%) in women with a variant CYP2D6 genotype (p = 0.03). Endoxifen and 4-hydroxy-tamoxifen inhibited estradiol-stimulated MCF7 cell proliferation with equal potency. *In vitro*, troleandomycin, an inhibitor of CYP3A4, inhibited the demethylation of tamoxifen to N-desmethyl-tamoxifen by 78% (95% CI = 65% to 91%), and quinidine, an inhibitor of CYP2D6, reduced the subsequent hydroxylation of N-desmethyl-tamoxifen to endoxifen by 79% (95% CI = 50% to 108%). Endoxifen is an active tamoxifen metabolite that is generated via CYP3A4-mediated N-demethylation and CYP2D6-mediated hydroxylation. Coadministration of paroxetine decreased the plasma concentration of endoxifen. Our data suggest that CYP2D6 genotype and drug interactions should be considered in women treated with tamoxifen.

A Pilot Study Examining Energy Conservation for Cancer Treatment-Related Fatigue

Barsevick, A., Whitmer, K., Sweeney, C., and Nail, L.

Cancer Nursing, *25* (2002), 333–341

The purpose of this pilot study was to examine the feasibility of conducting an energy conservation and activity management (ECAM) intervention for cancer treatment-related fatigue and describe patterns of cancer treatment-related fatigue for two groups undergoing active treatment, one receiving the ECAM intervention and a nonequivalent control group receiving standard care for cancer treatment-related fatigue. The ECAM group received three telephone sessions focusing on the provision of information about fatigue, development of an energy conservation plan, and evaluation of the plan's effectiveness. Data for the ECAM group were collected before treatment, at an expected fatigue high point during treatment, and an expected low point of fatigue after treatment. The nonequivalent control group lacked the pretreatment measure but had equivalent follow-up measurement points. The feasibility of conducting the ECAM intervention was supported by patient adherence in receiving all three sessions of the intervention and by their self-reports of its usefulness and plans to continue using ECAM skills. Patterns of fatigue differed for the ECAM study group and the nonequivalent control group, suggesting that the intervention moderates the expected rise in fatigue due to cancer therapy. A full-scale clinical trial is needed to evaluate the efficacy of the ECAM intervention.

Risk Factors for Development of Delirium among Oncology Patients

Ljubisavljevic, V. and Kelly, B.

General Hospital Psychiatry, *25* (2003), 345–352

To determine the occurrence of delirium in oncology inpatients and to identify and evaluate admission characteristics associated with the development of delirium during inpatient admission, a prospective observational study was conducted of 113 patients with a total of 145 admissions with histological diagnosis of cancer admitted to the oncology unit over a period of 10 weeks. At the point of inpatient admission, all patients were assessed for the presence of potential risk factors for development of delirium. During the index admission patients were assessed daily for the presence of delirium using the Confusion Assessment Method. Delirium was confirmed by clinician assessment. Delirium developed in 26 of 145 admissions (18%) and 32 episodes of delirium were recorded with 6 patients having 2 episodes of delirium during the index admission. Delirium occurred on average 3.3 days into the admission. The average duration of an episode of delirium was 2.1 day. Four patients with delirium (15%) died. All other cases of delirium were reversed. Factors significantly associated with development of delirium on multivariate analysis were advanced age, cognitive impairment, low albumin level, bone metastases, and the presence of hematological malignancy. Hospital inpatient admission was significantly longer in delirium group (mean: 8.8 days vs. 4.5 days in nondelirium group, $p <$ 0.01). Delirium among hospitalized oncology patients is a common condition. Identification of risk factors for delirium at the time of inpatient admission can be used to recognize those patients at the greatest risk and may aid prevention, early detection and treatment.

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Impaired Communication Capacity and Agitated Delirium in the Final Week of Terminally Ill Cancer Patients: Prevalence and Identification of Research Focus

Morita, T., Tei, Y., and Inoue, S.

Journal of Pain and Symptom Management, *26* (2003), 827–834

The maintenance of intellectual activity is an important area in the "good death" concept. To clarify the communication capacity levels of terminally ill cancer patients in their final week, and to identify factors contributing to the development of communication capacity impairment and agitated delirium, a retrospective study was performed on 284 consecutive hospice inpatients. The data were collected by chart review, and two independent raters measured the degree of communication capacity and agitation in the last week, using multiple items from the Memorial Delirium Assessment Scale, the Communication Capacity Scale, and the Agitation Distress Scale. The percentages of patients who could achieve complex communication were 43%, 28%, and 13% at 5 days, 3 days, and 1 day before death, respectively. Agitated delirium was identified in 20%. Patients receiving opioids at a dose of ≧120 mg oral morphine equivalents/day 1 week before death were significantly unable to communicate clearly 3 days before death (0.48 [0.28–0.84], $p = 0.011$). Male gender and the presence of icterus were identified as significant contributors to the development of agitated delirium (odds ratios [95% C.I.] = 2.6 [1.4–5.0], $p < 0.01$; 2.4 [1.3–4.4], $p < 0.01$). These findings demonstrate that communication capacity impairment and agitated delirium are frequently observed in terminally ill cancer patients, and are significantly correlated with a higher dose requirement of opioids and the presence of icterus. To explore the best management to maintain the intellectual activity of dying patients, research should focus on a homogeneous sample of patients receiving high-dose opioids and those with hepatic encephalopathy. In the meanwhile, clinicians should educate patients and family members about the nature of the dying process and help facilitate the completion of life purposes requiring complex mental activities before the latest stages of cancer.

Perception of Discomfort by Relatives and Nurses in Unresponsive Terminally Ill Patients with Cancer: A Prospective Study

Bruera, E., Sweeney, C., Willey, Palmer, J.L., Strasser, F., and Strauch, E.

Journal of Pain and Symptom Management, *26* (2003), 818–826

Perception of discomfort in dying patients is a risk factor for distress and bereavement among relatives. This study determined the perception of discomfort, the frequency of observed behaviors, and their association among relatives and among nurses who care for unresponsive dying patients. Sixty unresponsive dying patients' relatives and their nurses were asked to evaluate patient discomfort levels, the frequencies of six observed behaviors, and the suspected reasons for the patient discomfort. The mean levels of perceived discomfort were similar, but the association was poor between the relatives and the nurses. Relatives reported significantly more observed behaviors and associated more pain as a reason for patient discomfort than did nurses. The findings suggest that relatives are intensely attuned to their loved ones' conditions and reactions, and nurses' responses are fairly similar. Further research is warranted, however, to distinguish between the distress that the relatives perceive and the actual suffering of patients.

The Efficacy of Acupressure and Acustimulation Wrist Bands for the Relief of Chemotherapy-Induced Nausea and Vomiting: A University of Rochester Cancer Center Community Clinical Oncology Program Multicenter Study

Roscoe, J., Morrow, G., Hickok, J., Bushunow, P., Pierce, H.I., Flynn, P., Kirshner, J., Moore, D., and Atkins, J.

Journal of Pain and Symptom Management, *26* (2003), 731–742

As an adjunct to standard antiemetics for the relief of chemotherapy-induced nausea and vomiting (NV), 739 patients were randomly assigned to either: (1) acupressure bands, (2) an acustimulation band, or (3) a no-band control condition. Patients in the acupressure condition experienced less nausea on the day of treatment compared to controls ($p < 0.05$). There were no significant differences in delayed nausea or vomiting among the three treatment conditions. Additional analyses revealed pronounced gender differences. Men in the acustimulation condition, but not the acupressure condition, had less NV compared to controls ($p < 0.05$). No significant differences among the three treatment conditions were observed in women, although the reduction in nausea on the day of treatment in the acupressure condition, compared to the no-band condition, closely approached statistical signifi-

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cance ($p = 0.052$). Expected efficacy of the bands was related to outcomes for the acupressure but not the acustimulation conditions.

Analgesic Effect of Auricular Acupuncture for Cancer Pain: A Randomized, Blinded, Controlled Trial

Alimi, D., Rubino, C., Pichard-Léandri, C., Fermand-Brulé, S., Dubreuil-Lemaire, M., and Hill, C.

Journal of Clinical Oncology, *21* (2003), 4120–4126

During the last 30 years, auricular acupuncture has been used as complementary treatment of cancer pain when analgesic drugs do not suffice. The purpose of this study is to examine the efficacy of auricular acupuncture in decreasing pain intensity in cancer patients. Ninety patients were randomly divided in three groups; one group received two courses of auricular acupuncture at points where an electrodermal signal had been detected, and two placebo groups received auricular acupuncture at points with no electrodermal signal (placebo points) and one with auricular seeds fixed at placebo points. Patients had to be in pain, attaining a visual analog score (VAS) of 30 mm or more after having received analgesic treatment adapted to both intensity and type of pain, for at least 1 month of therapy. Treatment efficacy was based on the absolute decrease in pain intensity measured 2 months after randomization using the VAS. The main outcome was pain assessed at 2 months, with the assessment at 1 month carried over to 2 months for the eight patients who interrupted treatment after 1 month. For three patients, no data were available because they withdrew from the study during the first month. Pain intensity decreased by 36% at 2 months from baseline in the group receiving acupuncture; there was little change for patients receiving placebo (2%). The difference between groups was statistically significant ($p < 0.0001$).

The observed reduction in pain intensity measured on the VAS represents a clear benefit from auricular acupuncture for these cancer patients who are in pain, despite stable analgesic treatment.

Differential Effects of Paroxetine on Fatigue and Depression: A Randomized, Double-Blind Trial from the University of Rochester Cancer Center Community Clinical Oncology Program

Morrow, G., Hickok, J., Roscoe, J., Raubertas, R., Andrews, P., Flynn, P., and Hynes, H., Banerjee, T., Kirshner, J., and King, D.

Journal of Clinical Oncology, *15* (2003), 4635–4641

Fatigue and depression typically occur together in cancer patients, suggesting a common etiology, perhaps based on serotonin. This randomized clinical trial tested whether paroxetine, a selective serotonin reuptake inhibitor antidepressant known to modulate brain serotonin, would reduce fatigue in cancer patients and whether any reduction was related to depression. Cancer patients undergoing chemotherapy for the first time were assessed for fatigue. Of 704 patients who reported fatigue at their second chemotherapy cycle, 549 patients were randomly assigned to receive either 20 mg of oral paroxetine hydrochloride daily or placebo for 8 weeks. The assessments of fatigue and depression were performed at cycles 3 and 4 of chemotherapy.

A total of 244 patients treated with paroxetine and 235 patients treated with placebo provided assessable data. No difference was detected in fatigue between patient groups. At the end of the study, there was a difference between groups in the mean level of depression (Center for Epidemiologic Studies Depression scores, 12.0 vs. 14.8, respectively; $p < 0.01$).

Paroxetine had no influence on fatigue in patients receiving chemotherapy. A possible explanation is that cancer-related fatigue does not involve a reduction in brain 5-HT levels.

A Phase II Trial of Reiki for the Management of Pain in Advanced Cancer Patients

Olson, K., Hanson, J., and Michaud, M.

Journal of Pain and Symptom Management, *26* (2003), 990–997

This trial compared pain, quality of life, and analgesic use in a sample of patients with cancer pain ($n = 24$) who received either standard opioid management plus rest (Arm A) or standard opioid management plus Reiki (Arm B). Participants either rested for 1.5 h on Days 1 and 4 or received two Reiki treatments (Days 1 and 4) 1 h after their first afternoon analgesic dose. Visual analogue scale (VAS) pain ratings, blood pressure, heart rate, and respirations were obtained before and after each treatment/rest period. Analgesic use and VAS pain scores were reported for 7 days. Quality of life was assessed on Days 1 and 7. Participants in Arm B experienced improved pain control on Days 1 and 4 following treatment, compared to Arm A, and improved quality of life, but no overall reduction in opioid use. Future research will determine the extent to which the benefits attributed to Reiki in this study may have been due to touch.

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Symptom Prevalence, Distress, and Change over Time in Adults Receiving Treatment for Lung Cancer

Cooley, M., Short, T., and Moriarty, H.

Psycho-Oncology, *12* (2003), 694–708

Adequate management of symptoms in adults with lung cancer is an important focus for clinical interventions. Knowledge of symptom prevalence and distress can be used to develop empirically based interventions that can potentially reduce distressing symptoms and improve quality of life. The purposes of this study were to describe which symptoms are most distressing, describe the prevalence of symptoms in adults receiving treatment for lung cancer, identify how symptoms change over time, and identify patient-related and clinical characteristics related to symptom distress. Data were available from 117 patients. Fatigue and pain were the most distressing symptoms for each group and at each time. Significant differences in distressing symptoms among the treatment groups were noted for nausea, fatigue, bowel pattern, and concentration at entry into the study and difficulty with appetite at 6 months. Many of the individual symptoms demonstrated a decrease in distress from 0 to 3 months and then an increase in distress levels from 3 to 6 months. Many of the individual symptoms were associated with demographic covariates and treatment group values but no consistent pattern emerged over time except for baseline symptom distress. Symptom distress at entry to the study was a strong predictor of nine distressing symptoms at 3 months and seven distressing symptoms at 6 months. Questionnaires such as the SDS may be useful as screening instruments to target those who need more intensive interventions.

Treatment of Opiate-Related Sedation: Utility of the Cholinesterase Inhibitors

Slatkin, N. and Rhiner, M.

Journal of Supportive Oncology, *1* (2003), 53–63

Daytime sedation is a common and potentially dose-limiting side effect of the opiate analgesics. The psychostimulants, such as methylphenidate, are frequently prescribed to treat this problem, but their use may be limited by side effects, such as weight loss, anxiety, or insomnia, or tolerance to their antisedative effects. Medications that enhance intracerebral cholinergic activity may offer an alternative treatment approach, since functional deficits of acetylcholine may, in part, account for the sedative and mind-dulling effects of opiates. Preliminary studies with donepezil, a centrally acting acetylcholinesterase (AChE) inhibitor approved for use in Alzheimer's disease, have suggested at least a short-term benefit in treating opiate-related sedation. In a retrospective study, we reviewed the results of donepezil treatment in 40 patients, 37 of whom had cancer, which in most cases was in an advanced stage. All patients were receiving chronic opiate treatment, and the majority were on a stable opiate dose in the 2 weeks preceding the initiation of donepezil. The average opiate dose was 844 mg in oral morphine equivalents. Seventy-three percent of the patients experienced moderate or greater improvement on the Clinical Global Improvement Scale. Evaluations on the Epworth Sleepiness Scale (ESS; 0–24), visual analog sleepiness scale (VAS; 0–100), and average pain levels (0–100), before and after donepezil treatment, were obtained on 19 patients. Prior to donepezil, ESS, VAS, and pain scores were 18.5, 76.3, and 47.4. After an average of 21 days of donepezil treatment, scores were 9.5 ($p < 0.001$), 39.5 ($p < 0.001$), and 36.6 ($p = 0.07$), respectively. The mean total duration of treatment for patients was 54.4 days, with most patients stopping donepezil due to progression to a terminal state. Patients were generally started on 5 mg/day, but 17 patients required higher doses to achieve or maintain efficacy, the average treatment dose being 9.13 mg/day. We concluded from this study that centrally acting AChE inhibitors are promising agents in the treatment of sedation and perhaps of other neuropsychological side effects associated with the use of opiate analgesics.

Pilot Evaluation of Citalopram for the Relief of Hot Flashes

Barton, D., Loprinzi, C., Novotny, P., Shanafelt, T., Sloan, J., Wahner-Roedler, D., Rummans, T., Christensen, B., Dakhill, S., and Martin, L.

Journal of Supportive Oncology, *1* (2003), 47–51

Symptoms associated with premature menopause are a significant problem for women with a history of breast cancer who cannot take hormone replacement therapy. Thus, effective nonhormonal alternatives are needed to manage hot flashes, the most prevalent symptom of menopause. Previous studies have defined that venlafaxine, an antidepressant, is an effective treatment for such hot flashes. Based on suggestive anecdotal information, we set out to evaluate, in a pilot trial, whether the antidepressant citalopram might be a good nonhormonal treatment option to add to our armamentarium for controlling hot flashes. A prospective pilot study was developed in which patients were studied for

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5 weeks, with the first week used to establish a baseline, followed by 4 weeks of treatment with citalopram. During the first week of treatment, 10 mg/day of citalopram were taken, whereas 20 mg/day were taken during each of the following 3 weeks. Hot-flash diaries were completed daily, symptom diaries and quality-of-life items were completed weekly, and the Profile of Mood States was completed at baseline and at week 5. Evaluable patients who completed the study had a mean hot-flash frequency reduction of 58% and a mean hot-flash score reduction of 64% from baseline to week 5. The patients finishing the study also reported decreased anger, tension, and depression, as well as improved mood. This pilot trial suggests that citalopram may be an effective nonhormonal treatment for hot flashes in women who can tolerate it.

QUALITY OF PALLIATIVE CARE

Oregon Physicians' Perceptions of Patients Who Request Assisted Suicide and Their Families

Ganzini, L., Dobscha, S., Heintz, R., and Press, N.

Journal of Palliative Medicine, *6* (2003), 381–390

In 1997, the Oregon Death with Dignity Act was enacted, allowing a physician to prescribe a lethal dose of medication for a competent, terminally ill patient who requests one. In 2000, we conducted single, semistructured, in-depth, face-to-face interviews with 35 Oregon physicians who received a request for a lethal prescription. The interviews focused on physicians' perceptions of patients who requested assisted suicide, the reasons for the request, and the reactions of their families. The interviews were audiotaped, transcribed, and analyzed using qualitative techniques. Physicians described requesting patients as having strong and vivid personalities characterized by determination and inflexibility. These individuals wanted to control the timing and manner of death and to avoid dependence on others. These preferences reflected longstanding coping and personality traits. Physicians perceived that these patients viewed living as purposeless and too effortful, and that they were ready for death. The requests, which were forceful and persistent, could occur at any point after diagnosis of the terminal illness, and were paralleled by refusal of medical interventions including palliative treatments. Many family members were reluctant to support these requests until they recognized the strength of the preference.

The Pursuit of Physician-Assisted Suicide: Role of Psychiatric Factors

Bharucha, A., Pearlman, A., Back, A., Gordon, J., Starks, H., and Hsu, C.

Journal of Palliative Medicine, *6* (2003), 873–883

Physician-assisted suicide (PAS) has attracted considerable professional attention in recent years in the end-of-life care debate. The role of depression and other psychiatric illnesses on the patient's pursuit of PAS is unclear. As part of a qualitative study exploring the motivations, deliberations, and complications experienced by persons with incurable diseases who were actively seeking PAS, we conducted semistructured interviews that were reviewed for psychiatric content. In total, 159 interviews were conducted with 60 participants concerning 12 prospective cases (12 patients and 20 family members) and 23 retrospective cases (28 family members), with more than 3600 pages of transcripts. Depressive symptoms, when present, were not described by the subjects and/or their family members to be an influential factor in their pursuit of PAS; no subject appeared or was described to suffer from depression-related decisional incapacity. Findings from this study, albeit from a small and self-selected sample, highlight not only the importance of avoiding a reductionistic understanding of the role of psychiatric illnesses in contributing to serious pursuit of PAS, but also the pressing need for scientifically rigorous studies of PAS in samples representative of the larger population.

Predicting Mortality among Patients Hospitalized for Heart Failure Derivation and Validation of a Clinical Model

Lee, D., Austin, P., Rouleau, J., Liu, P., Naimark, D., and Tu, J.

JAMA, *290* (2003), 2581–2587

A predictive model of mortality in heart failure may be useful for clinicians to improve communication with and care of hospitalized patients. The objective of the study was to identify predictors of mortality and to develop and to validate a model using information available at hospital presentation. This is a retrospective study of 4,031 community-based patients presenting with heart failure at multiple hospitals in Ontario, Canada (2,624 patients in the derivation cohort from 1999 to 2001 and 1,407 pa-

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tients in the validation cohort from 1997 to 1999), who had been identified as part of the Enhanced Feedback for Effective Cardiac Treatment (EFFECT) study. The mortality rates for the derivation cohort and validation cohort, respectively, were 8.9% and 8.2% in hospital, 10.7% and 10.4% at 30 days, and 32.9% and 30.5% at 1 year. Multivariable predictors of mortality at both 30 days and 1 year included older age, lower systolic blood pressure, higher respiratory rate, higher urea nitrogen level (all $p < 0.001$), and hyponatremia ($p < 0.01$). Comorbid conditions associated with mortality included cerebrovascular disease (30-day mortality odds ratio [OR], 1.43; 95% confidence interval [CI], 1.03–1.98; $p = 0.03$), chronic obstructive pulmonary disease (OR, 1.66; 95% CI, 1.22–2.27; $p = 0.002$), hepatic cirrhosis (OR, 3.22; 95% CI, 1.08–9.65; $p = 0.04$), dementia (OR, 2.54; 95% CI, 1.77–3.65; $p < 0.001$), and cancer (OR, 1.86; 95% CI, 1.28–2.70; $p = 0.001$). A risk index stratified the risk of death and identified low- and high-risk individuals. Patients with very low-risk scores (60) had a mortality rate of 0.4% at 30 days and 7.8% at 1 year. Patients with very high-risk scores (>150) had a mortality rate of 59.0% at 30 days and 78.8% at 1 year. Patients with higher 1-year risk scores had reduced survival at all times up to 1 year (log-rank, $p < 0.001$). For the derivation cohort, the area under the receiver operating characteristic curve for the model was 0.80 for 30-day mortality and 0.77 for 1-year mortality. Predicted mortality rates in the validation cohort closely matched observed rates across the entire spectrum of risk. Among community-based heart failure patients, factors identifiable within hours of hospital presentation predicted mortality risk at 30 days and 1 year. The externally validated predictive index may assist clinicians in estimating heart failure mortality risk and in providing quantitative guidance for decision making in heart failure care.

Communication and the Patient/Physician Relationship: A Phenomenological Inquiry

Coyle, N. and Sculco, L.

Journal of Supportive Oncology, *1* (2003), 206–215

All interaction between patient and medical team is mediated through communication. In working with advanced cancer patients, troubled communication between the patient and health care team is sometimes evident. The current study examined the perspective of seven advanced cancer patients on this communication. The patients were under the care of an urban cancer research center, and each had expressed, at least once, a desire for hastened death. Using a phenomenological form of inquiry, serial, "in-depth semistructured" interviews were conducted (mean = 3; range = 2–6) at a place convenient to the patient. The interviews were audiotaped, transcribed, coded, and organized into themes. The study findings suggest that the most important aspects of communication between the advanced cancer patient and medical team at an urban cancer research center are the extreme vulnerability of the patient to both style and content of the communication; the extreme sensitivity of the communication itself, because it concerns issues vital to the patient; and the complexity of the communication, encompassing and expressing both verbal and nonverbal messages, as well as intended and unintended messages. Conflict inherent in almost all communication between patient and medical team involved disagreement about goals of care and the participants' perception of not being treated with respect. Harm caused to the participant by communication missteps included loss of hope, a sense of abandonment, and diminished feelings of personal dignity and worth. The findings may not be representative of advanced cancer patients being cared for in a different treatment setting.

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