SURVIVAL ANALYSIS OF PAIN RELIEF PROVIDED BY DOXEPIN ORAL RINSE FOR ORAL MUCOSITIS PATIENTS

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OBJECTIVES: To assess covariates that affect the duration of pain relief doxepin oral rinse provided cancer patients with painful oral mucositis. METHODS: Fifty consecutive patients with oral mucositis due to head and neck radiation therapy participated in the original study. An examination of the mouth was completed and oral mucositis scored using the Oral Mucositis Assessment Scale (OMAS) which assesses erythema severity and ulceration size. Oral pain was assessed with a visual analogue scale (VAS) prior to taking the rinse and then at five, 15, 30 minutes, one-hour, while continuing every half hour up to three-hours, and at four-hours following rinsing. The time until recurrence of pretest pain level was defined as the time it took for VAS pain scores to reach or exceed initial pain scores. Recurrence of pain relief was right censored at four-hours for twenty patients; survival analysis was utilized to determine what factors were associated with recurrence of pain. RESULTS: Significant pain reduction was reported. Patients described, on average, a 55.6% reduction in pain after 15 minutes of doxepin rinsing. Recurrence of pain was slow and significant reduction in pain from baseline continued at four hours (p < 0.0001). The hazard ratios from the Cox proportional hazards model (p < 0.001) determined that holding all other variables constant, an increase by one unit in either the baseline pain severity, the worst documented erythema score, or the relative reduction of pain at 15 minutes, decreased the rate of pain recurrence at any time (t) by 45.3, 38.8, or 71.8% respectively. CONCLUSIONS: This research shows good results for doxepin oral rinse. Mucositis patients who reported higher baseline pain, more severe erythema, or larger relative reductions in pain after 15 minutes of rinsing, had a larger probability of extended pain relief.

TIME TO CANCER DIAGNOSIS (TDX) IN YOUNG AMERICANS DEPENDS ON TYPE OF CANCER AND HEALTH INSURANCE STATUS

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OBJECTIVE: In the US, 18–30 year-olds (yo) have less health insurance than any other age group. Because delays in diagnosis may therefore be an explanation for slower progress in cancer survival improvement in this age group, we compared health insurance status with their time from onset of first cancer symptom to diagnosis (TDX). METHODS: From June, 2001 to May, 2003, MDACC registered 270 newly-diagnosed 15–29 year-olds with acute leukemia, Hodgkin disease, non-Hodgkin lymphoma, sarcomas, brain tumors and thyroid cancer. A total of 235 had complete data on TDX, type of cancer, age, gender, race/ethnicity, marital status, religion, and according to zip code of residence, median household income, population density and urban-vs-rural location. RESULTS: In multivariate analysis, only the type of cancer and health insurance status were significantly correlated with TDX (p < 0.05). The log mean TDX in patients with public or no health insurance was 6.3 weeks longer than in patients with private insurance and 13.1 weeks longer than in self-pay patients (p < 0.001). In six of seven evaluable histologies, the log mean TDX was longer, by an average of 10.6 weeks, in patients with public vs. those with private insurance (p < 0.05 in five histologies). In all four histologies evaluable for stage, the log mean TDX was longer, by an average of 17.5 weeks, in patients with advanced stage than in those with localized disease. CONCLUSIONS: Young adults with cancer with inadequate health insurance are likely to have a delay in diagnosis and are at risk for a more advanced stage of disease. Health insurance status appears to be a stronger determinant than other parameters of socioeconomic status. As a factor contributing to the relative lack of survival improvement in young adults with cancer, lack of health insurance in this age group is a problem that the United States can and should solve.

ECONOMIC EVALUATION OF INTRAVENOUS (IV) ZOLEDRONIC ACID VS. OTHER IV BISPHOSPHONATES IN THE PREVENTION OF BONE COMPLICATIONS IN BREAST CANCER PATIENTS WITH BONE METASTASES: A UK BUDGET IMPACT ANALYSIS

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OBJECTIVE: IV bisphosphonates are effective in reducing skeletal related events (SREs) and alleviating bone pain in breast cancer patients with bone metastasis. However, these agents are characterized by different efficacy, administration time, and costs. Formal analyses are therefore needed to understand their overall economic value and budgetary impacts. We conducted a formal economic analysis to compare the budgetary impacts of these agents, from the UK NHS perspective. METHODS: A Markov model was developed to simulate over a period of seven years the survival and incidence of SREs for a hypothetical cohort of 1000 patients receiving no treatment (NT) or monthly injections of ibandronate (IBN), generic pamidronate (PA) or zoledronic acid (ZA). Probabilities of SREs (extrapolated from skeletal morbidity rates [SMR]) were obtained from published clinical trials of each agent. Costs of drugs and their infusion and cost of SREs were estimated from published sources. Survival was identical across all groups (25 months). RESULTS: Based on relative reduction of risk of SREs (ratio of SMR of bisphosphate therapy vs. no therapy), the cumulative number of SREs over the lifetime of the patients was lowest for ZA (3820 events), followed by PA (4430), IBN (4890), and NT (6020). Total discounted costs (which included drug costs, infusion administration costs, and cost of treating SREs) for the cohorts of 1000 patients were £2,457,000 lower for ZA than IBN, £1,160,000 lower than PA, and £556,000 lower than NT. Fifty and 75% of these savings, respectively, occurred within the first 12 and 24 months of the simulation. These findings were robust across various sensitivity analyses. ZA was less costly and more effective than all other treatment options, and is therefore the economically preferred option. CONCLUSIONS: Zoledronic acid appears to be the most cost-effective and least costly IV bisphosphonate therapy.