

PP37. Pharmacoeconomic analysis of the antagonists 5-HT₃ in the control of chemotherapy-induced emesis in children

Jiménez Monteagudo M, Carrera J, León P, Gimeno J, Sierrasesúma L. Department of Pediatric Oncology, Department of Pharmacy, Clínica Universitaria, School of Medicine, University of Navarra, Spain

Background: To compare the clinical efficacy and the relative cost-effectiveness ratios of therapy with ondansetron (OND) vs tropisetron (TRO) vs chlorpromazine (CFIL) + dexamethasone (DEX) in children receiving highly and moderately emetogenic chemotherapy.

Patients and Methods: Children with solid malignant tumors who were chemotherapy-naïve, were randomized in a double-blind, placebo, cross-over trial in order to be administered CHL 0,3 mg/kg and DEX 2 mg/m² intravenously (iv.) 30 min before and 6h and 12h after chemotherapy or OND 5 mg/m² i.v. 30 min before and 12h after chemotherapy or TRO 0,2 mg/kg iv. 30 min before chemotherapy as antiemetic therapy. Direct costs included drug acquisition, drug delivery, equipment used in managing vomiting, and additional nursing time costs. Indirect costs included drugs and materials used to treat persistent nausea and/or vomiting and the side effects of the antiemetics regimens.

Results: 46 patients for a total number of 302 chemotherapy cycles were evaluated. *Highly emetogenic chemotherapy.* A complete response (0 emetic episodes) for emetic episodes was achieved in 34% and 28,1% of the patients in OND and TRO groups respectively, versus 16,7% in CHL + DEX group ($p < 0.01$). There was no statistically significant differences in the clinical efficacy between OND and TRO groups. The cost per successfully treated patient (0 emetic episodes and no adverse events) was \$16 for CHL + DEX, \$18,3 for OND and \$17,8 for TRO. *Moderately emetogenic chemotherapy:* Results did not show any significant differences in the clinical efficacy between the three antiemetics regimens. The cost per successfully treated patient was \$14,8 for CHL + DEX, \$44,8 for OND and \$35,2 for TRO. A sensitivity analysis was conducted varying the drug acquisition prices and the clinical efficacy, and the conclusions did not differ.

Conclusions: OND, TRO and CHL + DEX regimen are equally cost-effective treatments for the control of acute emesis following highly emetogenic chemotherapy in children. CHL + DEX regimen is as effective as OND and TRO in the prevention of acute emesis in children receiving moderately emetogenic chemotherapy, but the costs of the antiemetic therapy with CHL + DEX regimen are lower than the costs with OND and TRO.

Jiménez Monteagudo M, Departamento de Pediatría, Hospital Santa Bárbara, C/Malagón s/n, Puertollano, Ciudad Real 13 500, Spain

PP38. Issues in developing an economic evaluation of an innovative cancer control program for the medically underserved

Jones WJ, Rodgers K, Nixon DW, Hoskins D, Wilson D, Lackland D. Hollings Cancer Center, Medical University of South Carolina, Charleston, SC, USA

Background: Cancer morbidity and mortality rates in the U. S. state of South Carolina are among the highest in the nation, and are greatest among socioeconomically disadvantaged and nonwhite (primarily African-American) citizens. The Coastal Cancer Control Program (CCCP) is an innovative five-year, \$4.5 million project designed to address the cancer prevention and control needs of military dependents and other medically underserved citizens of coastal South Carolina. The CCCP tests the hypothesis that a socially and culturally appropriate program involving education by health care professionals and follow up by trained community volunteers will improve cancer screening and risk reduction practices among traditionally medically underserved residents. The program involves a coordinated effort in early cancer detection, including mobile screening facilities, public education, primary cancer prevention interventions, and follow up care.

Methods: The economic evaluation currently being developed attempts to deal with important methodological and substantive issues, including the following:

1. Educational and mentoring efforts by unpaid volunteers (Volunteer Adjunct Researchers, or VARS), who are socially and racially representative of the communities in which they work, are central to program operations. It is hypothesized that the VARs will be more effective in bringing about healthy behaviors in the underserved than traditional health service personnel. However, there is little established knowledge on how to measure the health care cost-effectiveness of activities carried out by unpaid, nontraditional volunteers. New, innovative measures will have to be developed.

2. Mobile screening services are to be provided to a geographically dispersed, relatively inaccessible population of traditionally underserved residents. Given this, program researchers are currently considering what format for mobile services would be most cost-effective.

3. The target population for the CCCP primarily consists of medically underserved South Carolina residents. It will be difficult to define program success in economic terms, and to compare the cost-effectiveness of this cancer education and prevention program to those (primarily involving white middle-class populations) described in the literature.

Results: Currently, the authors have no results, but anticipate presenting information regarding their development and evaluation methods of analysis.

Discussion: The CCCP is an innovative program attempting to improve health behaviors and outcomes in a primarily African-American population that has extremely high rates of cervical, breast, prostate, colorectal and other cancers. Since this population has historically not had access to adequate cancer education and prevention, and is historically suspicious of and resistant to the efforts of "establishment" health providers, economic evaluation will have to involve correspondingly new and appropriate measures and methods. This presentation will deal with the efforts to accomplish this objective.

Jones WJ, Department of Health Administration and Policy, 408 Harborview Office Tower, Medical University of South Carolina, Charleston, SC 29425, USA

PP39. The cost of radiation treatment at two Greek radiotherapy centres

Kardamakis D¹, Salvaras N², Dimopoulos J¹

¹University of Patras Medical School, Department of Radiology, Patras, Greece; ²401 Army General Hospital, Department of Radiotherapy, Athens, Greece

Background: The objective of this study was to calculate, for the first time, the cost of radiation treatment at two Radiotherapy Departments in Greece, accommodated in General Hospitals in Athens and Patras.

Methods: The study period expanded from July 1992 to December 1993. The Departments were equipped with high-energy treatment machines (linear accelerator or cobalt unit), simulators and treatment planning computers and were appropriately staffed. The Department of Radiotherapy in Patras is located in a 700 bed Teaching Hospital, funded by both the University and the National Health System. The Department of Radiotherapy at the 401 Army Hospital of Athens is located in a 600 bed Hospital, funded by the Ministry of Defence. All patients treated were diagnosed with having either solid tumours or haematological malignancies, and received either radical or palliative radiotherapy.

Results: An average of 658 and 341 patients were treated during the study period at Patras and Army Hospital respectively. The total cost was 82,238,000 Drs for Patras Hospital and 54,225,000 Drs for Army Hospital. The cost per patient was 159,018 Drs for the Athens Department and 124,982 Drs for the Patras Department. We emphasize here that this cost is for outpatients only, excluding medication and transportation expenses.

Discussion: Despite the weaknesses of this study due mainly to absence of standard methodology, the data obtained can be used in several ways: a. Clinicians and administrators should be aware of the total cost of anticancer treatment in order to determine optimal patterns of care, b. The cost per patient was 159,018 Drs and 124,982 Drs (in 1994 prices) for the Army and the Patras Hospital respectively, The cost per patient was 21% higher for the cobalt unit due to the smaller number of patients treated. c. The staff cost accounted for 17% and 33% of the total cost for the Army and Patras