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Comparative study of imipenem versus sulperazone plus amikacin in febrile neutropenia

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This prospective randomised trial was carried out to compare the efficacy of monotherapy with imipenem (A) and combination with sulperazone + amikacin (B) in the empiric treatment of febrile neutropenia. One hundred fifty episodes of febrile neutropenia in 97 cancer patients who were treated in one center were randomised to A (78 episodes) or B (72 episodes) arms of the study. Patients' characteristics and mean duration of neutropenia (<500/mm³) (5.4 vs 5.4 days) and the rate of use of CSFs (55% vs 54%) were similar in both arms. Fifty five (37%) microbiologically and 55 (37%) clinically documented infections were determined in all episodes. The success rate was 78% in the monotherapy group and 79% in the combination group. Drug modification was done in 21% and 11% of the episodes, respectively. Of the five death due to the treatment failure, two was related to gram negative septicemia and both of them were in B arm. Deaths in A arm were attributed to pneumocystis carinii pneumonia (2 cases) and pulmonary embolism (1 case). Otherwise, no significant differences between both study arm before and after modification were determined for the success of the treatment ($p = 0.8861$; $p = 0.4584$, respectively). The main toxicities were nausea (5% of patients), tremor (2%), convulsion (1%) in A arm; hypokalemia (1.5%) and renal failure (1.5%) in B arm. In conclusion; the efficacy of monotherapy with imipenem and combination with sulperazone + amikacin were similar with different toxicity profiles. Imipenem may be a good alternative of the combinations with aminoglycosides for the treatment of febrile neutropenia, especially in the patients with renal dysfunction.

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Empowering communities, patients, and families through information

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Purpose: People who have cancer as well as family members, friends, and other caregivers need sources of timely, accurate, and useable information.

Methods: Information is a critical source of power. Research indicates that better-informed patients achieve better therapeutic outcomes. Traditionally, nurses have provided patients and families with information. In collaboration with an ardent publisher, a nurse can adapt research findings relating to information needs and learning techniques, reading and comprehension levels of various populations, suitable graphics and accurate information to books and periodicals that appeal to and are useful to lay readers. Yet, few nurses seek these important publishing opportunities. This presentation encourages nurses to broaden the scope of their teaching efforts with suggested strategies for successful publication in the lay health information genre.

Conclusion: Nurses who seek and use opportunities to write for lay audiences can reach thousands of people, more than most individual nurses could hope to affect in day-to-day traditional nursing roles. Such work is a logical extension of nurses' traditional roles as health educators and patient advocates.

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Re-186-HEDP for palliation of pain in patients with metastatic bone disease – Preliminary results

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Aim: In this continuing study we evaluated the effectiveness of Re-186-HEDP in 25 patients with painful metastatic bone disease.

Materials & Method: 25 patients were studied, 20 M/5 F (mean 67.48 y with prostatic cancer (n = 19), NSCLC (n = 1) and breast cancer (n = 5). All pts had multiple skeletal metastases and on analgesics (NSAIDs, or opiates). The Re-186-HEDP (33.2–37.2 mCi) was administered IV. Hematologic parameters were monitored and evaluated using WHO criteria. 5 pts received a second dose after 9–10 weeks. Evaluation was based on a "pain diary".

Results: Significant palliation was achieved in 20/25 of the patients (reduction/discontinuance of analgesics, increased mobility-activity and improved quality of life. The response was moderate in 3 pts and insignificant in 2 pts. Myelotoxicity was mild and required no treatment. No severe adverse effects were observed. Transient pain-flare was recorded in 8/25

Conclusions: Re-186-HEDP can offer significant pain palliation and improved quality of life for a relatively long period without being complicated by significant myelotoxicity in patients with painful bone metastases.

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Variability in systemic availability of the 5-HT₃ receptor antagonist anti-emetics Ondansetron (Ond) and Granisetron (Gran) following oral administration

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Purpose: Although all 5-HT₃ receptor antagonists share similar mechanisms of action, the enzymes responsible for their metabolism differ markedly (Br J Clin Pharmacol 38: 557–566, 1994; Drug Metab Dispos 23: 1225–1230, 1995). This study evaluated the variability in systemic exposure following single oral doses of Ond, which is metabolised by many forms of CYP P450, and Gran, which is metabolised predominantly by the CYP 3A family.

Methods: Ten male and ten female volunteers received oral Ond (8 mg, as HCl 2H₂O) and Gran (1 mg, as HCl) on separate occasions. Blood samples were taken for 36 h after dosing for drug assay using an HPLC/MS/MS method with a lower limit of quantification of 1 ng/mL for Ond and 0.2 ng/mL for Gran.

Results: AUCs ranged from 62 to 445 ng.h/mL for Ond and <0.2 to 77.3 ng.h/mL for Gran. These correspond to a 7 fold range of AUCs for Ond to at least 387 fold range for Gran. Analysis of the ratios of the variances of standardised AUCs shows significantly ($p = 0.0032$) greater variability for Gran than Ond.

Conclusion: These data indicate that the metabolic differences between 5-HT₃ receptor antagonists can result in significant differences in variability of exposure. Wide variations in exposure may lead to loss of efficacy in some patients. The clinical consequences of the wide range of exposure may lead to loss of efficacy in some patients. The clinical consequences of the wide range of exposure following orally administered Gran remain to be determined.

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Evaluation of body composition in patients with lung cancer by bioelectric impedance (BIA)

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Purpose: Bioelectrical impedance (BIA) is a simple method that measures the Resistance (R, related to body water) the Reactance (Xc, related to membrane integrity) and the phase angle (proportional to the ratio Xc/R) and can be useful for a more precise assessment of nutritional status in cancer patients (pts).

Methods: 24 male patients (P) with cancer of the lung were compared to 12 healthy controls. Resistance/Height (R/H), Reactance/Height (Xc/H), phase angle (Xc/R 180°/π) were directly determined from the impedance plethysmograph (BIA-101 RJL System); fat free mass (FFM), total body water (TBW), extracellular water (ECW), intracellular water (ICW), body cell mass (BCM), extracellular mass (ECM) and Na/K ratio were calculated by using the program Bodycomp5.

Results: The BMI of pts was normal (24.5 ± 3.1). R/H was not different between P and C while Xc/H was reduced in P ($24.1 \pm 6.2 \text{ Ohm/m vs } 30.5 \pm 4.0 \text{ p} = 0.001$). Phase angle was reduced as well ($4.5 \pm 1.1 \text{ vs } 6.1 \pm 0.4 \text{ p} < 0.0001$). FFM and TBW were normal in both groups. A highly significant increase in pts was seen in ECW% ($30.1 \pm 7.3 \text{ vs } 23.7 \pm 3 \text{ p} = 0.0007$ and Na/K ratio ($1.3 \pm 0.3 \text{ vs } 1.0 \pm 0.1 \text{ p} = 0.0001$). ECM% ($44.7 \pm 7.1 \text{ vs } 37.1 \pm 3.5 \text{ p} = 0.0001$ was increased at the expense of BCM% ($34.5 \pm 6.7 \text{ vs } 41.4 \pm 2.8 \text{ p} = 0.0001$ and ECM/BCM ratio increased ($1.4 \pm 0.4 \text{ vs } 0.9 \pm 0.08 \text{ p} < 0.0001$).

Conclusion: Our patients presented a normal BMI but BIA analysis revealed a significant reduction of BCM and ICW with relative expansion of extracellular spaces. The reduction of Xc, BCM and the increase in Na/K