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## PUBLICATION

**Emesis control in patients receiving adjuvant I.V. CMF or anthracycline chemotherapy for breast cancer**

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32 patients (pts) completed a diary card for the first five days of the first cycle of adjuvant chemotherapy. Questions addressed anticipatory nausea and vomiting, vomiting frequency, nausea intensity, appetite, anti-emetic use, sleep pattern, heartburn and any other symptoms. The standard anti-emetic policy is dexamethasone 10 mg pre chemo, followed by 8 mg daily for three days, granisetron po 1 mg pre chemo, and domperidone po prn up to 80 mg daily for three days. One patient reported anticipatory nausea and vomiting. Emesis control was excellent with only 1 patient vomiting more than once and 4% of patients vomited once only, nausea control again was excellent, 31% of patients had no nausea. Over the five days evaluated as patient days (n = 155), the incidence of no nausea was 70%, mild nausea 21%, moderate nausea 8% and only 1 patient had severe nausea though this only lasted for 1 day. Appetite was not significantly affected. 30% of pts reported an alteration in sleep pattern with insomnia on days 1, 2 and 3 being the main event. 30% of pts reported some heartburn. The other volunteered symptoms were constipation 2 pts and headache in 4 pts. The majority of pts had well controlled nausea and emesis. 30% sleep disturbance and heartburn suggests that, for some, the steroid dose is excessive. The extended audit to 100 pts will give us information on emesis control throughout chemotherapy, anticipatory nausea and vomiting and more detail on the incidence of steroid-related side-effects.

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## PUBLICATION

**Improved feasibility of amifostine (A) by using a new administration schedule**

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**Purpose:** Amifostine (A) has been proved to protect normal tissues from the effect of radiotherapy. The recommended application mode is a 15 min short infusion of A, soluted in 100–250 ml NaCl, 30 min prior to irradiation. A new administration schedule was examined determining influence on side-effects.

**Patients:** 46 patients (pts) with different tumors were treated with 200 mg/m<sup>2</sup> A, administered in 4 different schedules, followed by radiotherapy given in daily fractions of 2 Gy: Short infusion administration: group I (n = 14 pts) and group II (n = 9 pts): 200 mg/m<sup>2</sup> A in 250 ml NaCl over 15 min or 100 ml NaCl over 5 min, respectively: Bolus administration: group III (n = 12 pts) and group IV (n = 11 pts): 200 mg/m<sup>2</sup> A in 10 ml NaCl over 60 sec. All pts were premedicated with except of group IV.

**Results:** We observed the following amifostine-related side-effects (hypotension: HT; nausea and emesis; N/E); group I: HT WHO grade 1: 8 pts, N/E WHO grade 1/2: 6 pts; group II: HT WHO grade 1: 3 pts, N/E WHO grade 1/2: 3 pts; group III: HT WHO grade 1: 2 pts, N/E WHO grade 1/2: 0 pts; group IV: HT WHO grade 1: 0 pts, N/E WHO grade 1/2: 3 pts. The incidence of side-effects showed a significant decrease in acute toxicity between the short infusion and bolus injection (p = 0.012). There was no difference concerning the radioprotective effect of A.

**Conclusion:** These investigations have shown that bolus injection is safe and feasible and can save effort and time in the daily routine.

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## PUBLICATION

**A new technique of scalp cooling in preventing alopecia induced by anticancer chemotherapy**

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**Purpose:** To assess a new scalp cooling technique in the prevention of alopecia

**Methods:** The "Penguin cold therapy cap system" (MSC™) was used. Main innovations of the system are: even scalp cooling, long lasting scalp cooling and tailoring the number of cold caps to the regimen used. Hair loss assessment was performed by one of us (G.P.), according to WHO criteria. Patients tolerance was assessed by a standardized questionnaire

**Results:** Among 20 patients included, 2 (10%) requested to discontinue the study, after the 1<sup>st</sup> cycle, because of intolerance to scalp cooling.

Another 3 (10.5%), having developed grade 2 alopecia after the 2<sup>nd</sup> cycle, did not wish to continue. Among the 15 (75%) evaluable patients: in 7 (47%), MSC™ scalp cooling allowed the completion of treatment without any hair loss, in 2 (13%) with grade 1 alopecia, and in another 3 (20%) with grade 2 alopecia. In 3 patients (20%), scalp cooling did not prevent grade 3 alopecia. Overall, 12 of 15 (80%) evaluable patients demonstrated a satisfactory response (grade 0–2 alopecia) to scalp cooling. It is interesting that 60% of those who received anthracyclines (>60 mg/m<sup>2</sup>) and 50% of those who received taxanes were able to complete their planned treatment with no or only minor hair loss. None of the two patients who received 6 courses of CMF demonstrated hair loss.

**Conclusions:** the use of Penguin cold cap system achieved satisfactory protection from alopecia in 80% of patients treated with highly depilating chemotherapy. The flexibility of tailoring the number of cold caps to the particular needs of each chemotherapeutic regimen seems essential in preventing alopecia. Despite the fact that some discomfort from the local hypothermia is usual, real intolerance to scalp cooling rarely occurs.

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## PUBLICATION

**Phase II trial of Ceftriaxone (CRO) IV once a day in the outpatient management of short term neutropenic fever induced by chemotherapy**

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**Aim:** To study the safety and efficacy of Ceftriaxone IV once a day for ambulatory care of short term neutropenic fever.

**Methods:** A pilot, prospective, open non controlled clinical trial. Patients (PTS) with solid tumours treated with conventional chemotherapy with fever (axillary temperature over 38°C in two occasions or 38.5°C in a single record), ANC < 500 × mm<sup>3</sup> or between 500–1000 expected to fall below 500 in the next 24 hours. Performance status < 2. The antibiotic regimen was CRO 2 gr IV qd for 5 days administrated in the ambulatory chemotherapy room. They have a clinical evaluation daily by an oncologist, if the fever > 38.5°C at the third day or median blood pressure fall to below 85 mmHg the PTS was admitted for treatment inside the hospital. Fever of unknown origin (FUO), clinically documented infection (CDI) and microbiological documented infection (MDI) as the same universally criteria. Success: PTS recovery and completed the 5 days of treatment outpatient, Failure: need other antibiotic or inpatient management.

**Results:** From July, 1–96 to July, 1–97, 40 PTS were admitted. M/F ratio 8/32. Median age 50.4 y (range: 16–74 y) ANC: 187 × mm<sup>3</sup> (range: 100–500). Chemotherapy day 10 (range 8–15). Pathology: Breast 20, Lymphoma 4, Gastric 4, Sarcoma 6, Ovary 4, Lung 2. Clinical focus: Oral 14, Respiratory 12, Digestive tract 12, Non evidence 2. FUO: 2, CDI: 26, MDI: 12. Bacteremias 12, isolated germenes: E coli 4, Staphylococcus epidermidis 8. Success: 30 (75%) PTS and Failure: 10 (25%) PTS.

**Conclusion:** we don't have any related dead to the treatment and considered to the CRO as an effective and safety treatment for the ambulatory care of the short term neutropenic fever, it's the first study of this kind in our country and this strategy implies an important cost saving.

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## PUBLICATION

**Resistance to activated protein C due to the factor V Leiden mutation: A risk factor for chemotherapy-associated thrombosis**

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**Purpose:** To evaluate the importance of resistance to activated protein C (APCR) due to the Arg506 → Gln mutation of the factor V gene for the occurrence of thromboembolic complications during chemotherapy, we studied 80 women with gynecological malignancies (n = 20) and breast cancer (n = 60) during six month of adjuvant (n = 29) or palliative (n = 51) chemotherapy.

**Methods:** Blood samples were obtained prior to chemotherapy and after a six month treatment period. An aPTT based method (APC™ Resistance V, Chromogenix, Sweden) was used for assessing APCR. The results were expressed as APC-ratios (cut-off APC-ratio < 2). The Arg506 → Gln mutation of the factor V gene was determined using the polymerase chain reaction.

**Results:** 11 patients (14%) demonstrated resistance to APC. 9/11 patients were heterozygous for the factor V gene mutation. The incidence of thromboembolic complications during the observation period was 4/80 (5%). In 1/4 patients who had suffered from thrombosis the factor V gene mutation was diagnosed.