1209 ORAL

STUDIES ON VITALITY OF ORAL EPITHELIAL CELLS DURING AND AFTER HIGH-DOSE CHEMOTHERAPY; A NEW ASSAY FOR QUANTITATION OF CHEMOTHERAPY-INDUCED MUCOSITIS

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Introduction: Patients receiving high-dose chemotherapy followed by stem cell transplantation are at risk of devastating mucositis. Most previous prevention strategies are evaluated by clinical judgment, such as the WHO scale. Our aim was to develop a quantitative *in vitro* assay for mucositis, that can be used for quantitation of such interventions. *Patients and Methods:* Nine patients with locally advanced breast carcinoma received after induction chemotherapy, high-dose chemotherapy with CTC (carboplatin 1600 mg/m^2, thiotepa 480 mg/m^2, cyclophosphamide 6 g/m^2 divided over four days) followed by peripheral stem cell transplantation. Prior to and twice weekly during CTC, oral washings with 10 mL sterile saline were obtained. Vitality of mucosal cells was determined by trypan blue dye exclusion. Leucocytes were counted by fluorescence microscopy after incubation with acridine orange. At the same days morphology of cells was assessed by buccal mucosa smears stained according to Papanicolaou. *Results:* The mean vitality of buccal cells increased after CTC with a significant difference on day 7 compared to pretreatment. During therapy there was a tendency from mature to immature cells in buccal mucosa smears. Oral leucocyte levels were closely correlated with the blood leucocyte counts. *Conclusions:* Vitality of buccal cells obtained by oral washings increases during high-dose chemotherapy. This is possibly due to desquamation of the upper oral mucosa layer, with a shift from mature to more immature cells. These data can be quantitated and this assay may therefore be useful in studies aimed at prevention of mucositis.

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COMPLICATIONS OF VENOUS ACCESS PORT (VAP) IN PATIENTS WITH NON-SEMINOMATOUS TESTICULAR GERM CELL TUMOURS

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Introduction The complications related to the use of VAP's for the administration of CDDP based chemotherapy in patients with non-seminomatous testicular germ cell tumours (NSTGenCT) was retrospectively analyzed.

Patients & Methods During 1983–1993 128 VAP's (Infuse a Port, Infusaid) were implanted in 125 consecutive NSTGCT patients, median age 28 (range 16–55) yrs. Median VAP in situ time was 396 (range 7–1400) days.

Results 128 VAP's were together 50598 days in situ. In 23 pts 28 complications (21.9%) occurred. Complications were analyzed per 1000 VAP days (Ratio 0.55). Multivariant analysis showed increased risk of complications when VAP's were implanted during chemotherapy vs pre-chemotherapy ($P < .0005$), and local vs general anesthesia ($P < .05$).

Complication	Number	Ratio
Thrombosis	9 (7%)	0.18
Obstruction	7 (5.5%)	0.14
Catheter fracture	5 (3.9%)	0.10
Infection	4 (3.1%)	0.08
Skin necrosis	2 (1.6%)	0.04
Extravasation	1 (0.8%)	0.02

Conclusion VAP's are useful for the administration of chemotherapy in NSTGCT pts and should be implanted before chemotherapy is initiated to reduce the complication rate, especially thrombosis and obstruction.

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RANDOMISED DOUBLE-BLIND COMPARISON OF PAMIDRONATE OR CLODRONATE FOR HYPERCALCAEMIA OF MALIGNANCY: EFFECTS ON BONE METABOLISM MARKERS

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New and potentially more specific markers of bone resorption were recently identified: deoxypyridinoline (Dpd), pyridinoline (Pyd) (which are total cross-links) and the C-telopeptide of type I collagen (peptide-bound cross-links). We evaluated 32 hypercalcaemic pts. after 48 hr of intravenous rehydration who received either 90 mg pamidronate or 1500 mg clodronate as a 4 hr infusion. Serum and urine samples were collected at baseline, 2, 4, 7, 14, 21 and 28 days. We measured serum Ca, PO4 and PTH; and in a 2nd voided morning urine sample: urinary calcium (uCa), Dpd, Pyd (both by HPLC) and the C-telopeptide (Cross-laps) by an ELISA assay. Both bisphosphonates were effective treatments for hypercalcaemia, but the duration of normocalcaemia was longer after pamidronate (28 vs 14 days, $P = 0.01$). UCa (considered as the standard resorption marker) fell significantly in both arms partially reflecting inhibition of bone resorption, but also an increase in PTH. Dpd, Pyd and C-telopeptide had a significant larger and longer lasting decrease after pamidronate ($P < 0.01$). The C-telopeptide fall was significantly larger than Dpd or Pyd fall in both arms ($P < 0.01$). C-telopeptide is easier and faster to perform than Dpd and Pyd. The prolonged effect of pamidronate on hypercalcaemia is explained by the longer suppression of bone resorption than clodronate.

1212 POSTER

PROTECTION OF IRRADIATED HUMAN SKIN BY SELF-ADHESIVE, SILICONE-COATED POLYAMIDE NET DRESSING

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There is no established biological or pharmacological procedure to prevent acute skin reactions during irradiation. Mechanical protection of irradiated skin during treatment is therefore essential. Some silicone-coated materials developed for skin transplants may be beneficial to irradiated patients in this respect. In a prospective study, the tolerance of silicone-coated polyamide net was tested in 21 patients receiving radiotherapy due to malignant disease. In 7 patients the portal skin was intact and in 14 patients the portal included an epitheliolysis and a skin ulcer. The ability of silicone-coated net strips to adhere to irradiated skin and the local skin irritation under the adherent net was evaluated. Patient tolerance of dressing strips was good. There were no reactions to the adherent dressing net by non-irradiated skin. No additional skin irritation due to the tested material was observed in the irradiated region. The ulcers covered by silicone-coated dressings re-epithelialized quickly during radiotherapy. There was no injury to new epithelium during changes of dressing. Our results demonstrate that silicone-coated polyamide net dressings could be used for skin protection during irradiation. We expect that this material will facilitate the intensification of percutaneous radiotherapy.

1213 POSTER

DOUBLE-BLIND, COMPARATIVE TRIAL OF THE ANTIEMETIC EFFICACY OF TWO IV DOSES OF DOLASETRON MESILATE (DM) AND GRANISETRON (G) AFTER INFUSION OF HIGH-DOSE CISPLATIN CHEMOTHERAPY (CT)

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This 24-hour trial randomized 476 cancer patients at 29 centers to 1.8 or 2.4 mg/kg IV DM or G (3 mg) 30 minutes prior to $\geqslant$80 mg/m^2 IV cisplatin CT. Patients were stratified using gender and previous CT to four groups: male naive and non-naive and female naive and non-naive. Efficacy was measured using complete response (CR: 0 emetic episodes