

GRP-065 EVALUATION OF OCCUPATIONAL EXPOSURE TO ANTINEOPLASTIC DRUGS IN PHARMACY AND ONCOLOGY DEPARTMENT

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Background Several studies have shown evidence of adverse health effects associated with exposure to antineoplastic drugs. Hospital personnel involved in preparation and administration of antineoplastic drugs may be at risk if exposed to these hazardous pharmaceuticals.

Purpose The purpose of the study was to evaluate the potential exposure to antineoplastic drugs in the pharmacy and oncology departments in a Polish hospital under normal working conditions. The exposure was measured by determining cyclophosphamide (CP) in the urine of pharmacists, physicians and nurses.

Materials and Methods Eight hospital workers were included in the study. Urine samples were collected from 2 pharmacists, 2 physicians and 4 nurses. One pharmacist prepared antineoplastic drugs while the other pharmacist assisted. All four nurses in the oncology department were engaged in the administration of the drugs. The two physicians did not handle the drugs but they came in contact with treated patients. Total 24 h urine was collected in fractions and from each fraction the volume was recorded and used to calculate the total amount of CP excreted over the 24 hr period. Samples were collected with Cyto Urine Kits from Exposure Control Sweden AB. Samples were stored frozen until analysis with GC-MSMS.

Results Over the 24 hr periods, 62 urine samples from 8 hospital workers were collected. CP was detected in 31 urine samples (50%) involving all pharmacists, all physicians and 3 nurses. The total amount of CP excreted per worker ranged from 106 to 500 ng/24 hr. The mean amount of CP excreted per worker on group basis was 234 ng/24 hr (physicians: 343 ng/24 hr, pharmacists: 239 ng/24 hr, nurses: 177 ng/24 hr). The highest amount of CP excreted was found for one physician (500 ng/24 hr) and for one nurse (492 ng/24 hr). The amount of CP excreted in urine from the pharmacist who assisted in preparation (358 ng/24 hr) was higher than from the pharmacist who prepared the chemotherapy infusions (120 ng/24 hr). CP was not detected in the urine samples of one nurse indicating no measurable exposure to CP.

Conclusions The results show that almost all hospital workers tested were exposed to CP. In addition, the study demonstrates the highest exposure of personnel not directly involved in the preparation and administration of antineoplastic drugs. Clearly, more research is needed, but this is sufficient evidence that nurses and physicians involved in the area of cytotoxic administration on the ward can also be exposed to these hazardous drugs.

No conflict of interest.

GRP-066 EVALUATION OF PHARMACEUTICAL CARE ISSUES IN THE ASEPTIC PREPARATION UNIT AT A TERTIARY CARE HOSPITAL: A FOCUS ON CHEMOTHERAPY PRESCRIBING AND PREPARATION

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Background Medicines errors associated with high-risk agents such as chemotherapy drugs may have significant outcomes. At Sultan Qaboos University Hospital (SQUH), the aseptic preparation unit (APU) is responsible for preparing chemotherapy and Total Parenteral Nutrition (TPN) preparations. The number of total

chemotherapy orders has doubled over the past two years. Due to increased consumption, cost and complexity of regimes, it is important to for a chemotherapy-verifying pharmacist (CVP) to cheque all chemotherapy prescriptions prior to preparation.

Purpose The aim of the study was to describe and evaluate pharmaceutical care interventions, focusing on chemotherapy prescribing and preparation at SQUH.

Materials and Methods This retrospective descriptive study was based in the APU of SQUH. It covered a total time frame of February 2011 to March 2012, which was divided into two periods of 7 months of pre- and post-CVP involvement. The interventions were evaluated for type and cost.

Results During the study, 159 interventions were documented. Monthly interventions increased from 3 to 16 after the involvement of a CVP. Drug dosing (75%) was the most frequent intervention in the drug regimen category (59.7%). Interventions in drug selection (34.6%) included addition (25%) and deletion (27%) of drugs. Around 50% of the interventions avoided toxicity and 35% improved efficacy. The financial impact of CVP interventions was evaluated in 59 interventions (37%). The total cost saved from the 59 interventions was Omani R.O. 18,114 (€36,478). Methotrexate (12.5%) was the drug with most frequent interventions. The expensive drug with most frequent interventions was pegylated asparaginase (4.5%).

Conclusions Chemotherapy verification prior to preparation has been demonstrated to improve safety and efficacy and decrease health care costs. A clinical pharmacist's participation in chemotherapy preparation and prescribing is essential, in order to provide quality care.

No conflict of interest.

GRP-067 EVALUATION OF PROFESSIONAL PRACTISE ON DRUGS PRESCRIPTIONS IN A GERIATRIC UNIT: HOW TO IMPROVE THEM?

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Background Elderly patients suffering from many diseases and disorders are more likely to have multiple prescriptions. These multiple prescriptions could result in drug toxicity, reduce compliance and cost a lot.

Purpose Following the French health agency recommendations, we evaluated professional practise on drug prescriptions for very old inpatients of a university hospital.

Materials and Methods All prescriptions of 60 consecutive patients aged over 80 years admitted between November and December 2010 to the geriatric unit (35 beds) were evaluated following a grid. This grid contained 18 items divided into 4 themes:

- organisation of the prescriptions, drug schedule and dosage
- patients' weight
- number and type of drugs (psychotropic drugs for instance), presence of contra-indications
- biological adaptations

Results Median age was about 88 years (range: 80–96) and 70% of patients were women. The median number of drugs on the 60 prescriptions was 8 (range = 1–12). All prescriptions presented data on dosage and the drug schedule. Drugs were classified by therapeutic category on only one prescription. Half of the prescriptions specified the patients' weight. More than 80% of prescriptions had more than 5 drugs without redundancy concerning psychotropic drugs and non-steroidal anti-inflammatory agents. Four contra-indications were noticed among all prescriptions evaluated. All biological adaptations were followed.