Abstract No: 745 ***Health and Hygiene***

RENAL TOXICITY OF CISPLATIN IN PATIENTS WITH HEAD AND NECK CANCER IN SRI LANKA

K.S.R. Kumara[1, 3], R. Sivakanesan[2]* and S.Weerasingha[1]

[1]National Cancer Institute, Maharagama, Sri Lanka
[2]Department of Biochemistry, Faculty of Medicine, University of Peradeniya, Sri Lanka
[3]Postgraduate Institute of Science, University of Peradeniya, Sri Lanka
**skamburapolage@yahoo.com*

Cisplatin (*cis*-diamminedichloriplatinum(II),CDDP) is an anticancer ("antineoplastic" or cytotoxic) chemotherapy drug currently used for the treatment of testicular, bladder, head and neck, oesophageal, cervical, stomach and prostate cancer, Hodgkin and non Hodgkin lymphoma, neuroblastoma, multiple myeloma, mesothelioma and non-small cell lung cancer. Renal toxicity is a common side effect of cisplatin due to its accumulation in renal proximal tubular epithelial cells and subsequent injury. The objective of this study was to evaluate the incidence and severity of nephrotoxicity caused by low-dose Cisplatin among patients with head and neck cancer.

Thirty nine male patients with untreated head and neck carcinoma and admitted to the National Cancer Institute, Maharagama, were selected. These patients had no renal impairment and were awaiting low dose of cisplatin (40mg / m^2 / weekly for 5 days). Renal injury was assessed by measuring serum creatinine, 24 hour urinary creatinine clearance (CrCl), and the estimated glomerular filtration rate (eGFR).These were done after the second and the fourth cycles of treatment, to minimize the inconvenience to the patient. Serum creatinine above 110 µmol/l, CrCl below 50 ml/min/1.73m^2 and eGFR below 60ml/min/1.73 m^2 were baselines to identify renal toxicity. One patient could not be given the 2nd cycle due to development of renal toxicity.

Increase in serum creatinine after the second (89.5±20.58µmol/ l) and fourth cycles (94.8±30.58µmol/l) were significant ($p<0.05$). CrCl and eGFR significantly decreased ($p<0.05$) after the second and fourth cycles. Ten patients (26%) developed renal toxicity and seven (18%) left against the medical advice after the second cycle. Out of twenty one (55 %) patients who received the fourth cycle, only seven (18%) developed renal toxicity. Out of the 38 patients, 17 (45%) developed renal toxicity at the end of the fourth cycle which was higher than the 20-30% acute kidney injury reported in the literature. Discontinuation of cisplatin therapy in 63% of patients was observed in this study. It can be concluded that a high rate of renal toxicity was caused by cisplatin therapy in this group of patients.