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

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Cisplatin (*cis*-diamminedichloroplatinum (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 one of the most common side effects of Cisplatin due to its accumulation in renal proximal tubular, epithelial cells subsequent injury. The objective of this study was to evaluate the incidences and severity of nephrotoxicity caused by low-dose of Cisplatin among patients with head and neck cancer.

Thirty nine male patients who were admitted with untreated head and neck carcinoma to NCI, 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 (s.Cr), 24 hour urinary creatinine clearance (CrCl), and estimated glomerular filtration rate (eGFR).These were done after the second and the fourth cycles of treatment, to minimize inconvenience to the patient. S.Cr above 110 µmol/l, CrCl below 50 ml/min/1.73 m^2 and eGFR below 60ml/min/1.73 m^2 were used to identify renal toxicity. One patient could not be given the 2^{nd} cycle due to development of renal toxicity.

Increase in s.Cr after 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 second and fourth cycles. Ten patients (26.3%) developed renal toxicity and seven (18.4%) left against medical advice after second cycle. Out of twenty one (55.2 %) patients who received fourth cycle, seven (18.4%) developed renal toxicity. Out of the 38 patients studied, 17(44.7%) developed renal toxicity at the end of fourth cycle which was higher than 20-30% acute kidney injury reported in literature.