European Respiratory Society
Annual Congress 2012

Abstract Number: 2842

Publication Number: P2922

Abstract Group: 11.1. Lung Cancer

Keyword 1: Pharmacology **Keyword 2:** Thoracic oncology **Keyword 3:** No keyword

Title: Anti-cancer therapy and monitoring plasma concentration of carboplatin in lung cancer patients receiving hemodialysis

Dr. Yasumiko 13530 Sakamoto mikomikojuly@yahoo.co.jp MD [1], Dr. Aiko 13531 Masunaga aiko.masunaga@ab.auone-net.jp MD [1], Dr. Ryo 13532 Sato rkyxt653@ybb.ne.jp MD [1], Dr. Shinya 13533 Sakata sakata-1027@hotmail.co.jp MD [1], Dr. Sho 13534 Saeki saeshow@wg7.so-net.ne.jp MD [1], Dr. Ji-ichiro 13537 Sasaki saji@med.kitasato-u.ac.jp MD [1], Dr. Kazuhiko 13538 Nishi kazuhiko-nishi@fc.kuh.kumamoto-u.ac.jp MD [2], Dr. Tetsunobu 13539 Hamada hamada-a@kumamoto-u.ac.jp [3], Prof. Hideyuki 13540 Saito saitohide@fc.kuh.kumamoto-u.ac.jp [3] and Prof. Dr Hirotsugu 24075 Kohrogi kohrogi@kumamoto-u.ac.jp MD . [1] Department of Rsepiratory Medicine, Kumamoto University Hospital, Kumamoto, Japan, 860-8556 ; [2] Department of Respiratory Medicine, Kumamoto Saishunso National Hospital, Kumamoto, Japan ; [3] Department of Respiratory Medicine, Kumamoto University Hospital, Kumamoto, Japan and [4] Department of Respiratory Medicine, Kumamoto University Hospital, Kumamoto, Japan .

Body: To investigate the pharmacokinetics of carboplatin (CBDCA) in lung cancer who were receiving hemodialysis (HD), we measured plasma concentrations of platinum by inductively coupled plasma mass spectrometer. We sampled bloods from two patients at the starting of HD one hour after the finishing administration of CBDCA, and at the end of it. Patient 1, a 78 year-old man with SCLC, was treated with CBDCA(250mg/m²) and etoposide(50mg/m²)and received HD at day 1, 3, 8. Patients 2, 71 year-old man with NSCLC, was treated with CBDCA (200mg/m², day1) and paclitaxel (180mg/m², day1), received HD at day 1, 2, 3, 4, 5, 8, and he was treated with same doses of the drugs at day 28 as the second course and received HD at s.c. day 1(day 28), 2, 3, 5, 8. Plasma concentrations of platinum before HD were 6.76 to 8.16 μg/ml. Mean reduction rate of plasma platinum concentrations (after hemodialysis/before hemodialysis) was 16.4 ± 6.1%, suggesting highly effective clearance of CBDCA by hemodialysis. From 3 days after the administration of CBDCA, plasma concentrations of platinum at the end of HD were higher than those at the starting of the next HD. Thus, we speculated that CBDCA is stored in the tissues and then backflow to blood depending on the plasma concentration of platinum. In Patient 1, partial response and adverse events of grade 3 neutropenia and grade 4 thrombocytopenia were observed. In Patient 2, progressive disease and grade 4 neutropenia was observed. We conclude that in patients with lung cancer receiving HD, monitoring of plasma concentrations of platinum is valuable to get effective plasma concentrations of CBDCA or CDDP and to avoid severe adverse effects.