COMPARATIVE STUDY OF CHEMOTHERAPY REGIMENS BASED ON PLATINUM AND ITS DIFFERENT TOXICITIES IN PATIENTS WITH ADVANCED NSCLC

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Background:

Chemotherapy is the standard treatment for patients with advanced non-small cell lung cancer (NSCLC) who have EGFR WT and no ALK translocation.[1] First line treatment is based on doublets platinum in combination with other agents as Paclitaxel or Gemcitabine.[2-5] In our institution we performed a phase II study, that was presented en ASCO 2001 and was adopted by many places to use in patients with PS>1 and comorbidities, comparing the scheme Cisplatin-Gemcitabine (CDDP/G) on day 1, 8 and 15 (weekly) versus the standard scheme with CDDP on day 1 and G on day 1 and 8.This data showed that this schedule is less toxic than those combinations of G and CDDP used in known phase III studies, and also has higher compliance by patients with PS>2, maintaining efficacy in terms of OR, PFS, OS and symptomatic control.[6] The objective is to compare the toxicity profile and quality of life (QOL) of weekly chemotherapy regimens based on doublets platinum associated with gemcitabine and paclitaxel.

Methods:

163 patients (p) with NSCLC stage IIIB or IV were evaluated. Prior to each chemotherapy cycle, hematological, renal and hepatic function were tested. Patients were randomized to receive CDDP 30 mg/m2 and G 800 mg/m2 (CDDP/G arm), or Carboplatin AUC2 and P 80 mg/m2 (C/P arm) on day 1, 8 y 15 every 28 days. To evaluate toxicities CTC V3.0 was used and the assessing of symptoms was according Lung Cancer Symptom scale every 28 days.

Results

We included 163p with NSCLC stage IIIB (52p) and IV (111p). The median age was 60.3 years. 123p received CDDP/G and 40p received C/P. As for toxicity we observed that both regimens was well tolerated, with thrombocytopenia and neutropenia being the major toxicities; minimal non-hematologic side effects were seen (table 1). Regarding QOL, fatigue and loss of appetite were the most symptoms reported by patients in both schemes. Relative to dyspnea, hemoptysis, pain and cough there was symptomatic improvement with both schemes.

Conclusion

The patients in the CDDP/G arm showed more thrombocytopenia, nausea and kidney toxicity at all grades compared to those in C/P arm, who showed more neutropenia, anemia and fatigue. No treatment discontinuation was recorded. Both chemotherapy regimens were well tolerated and showed improvement in symptom control. The two schemes on day 1, 8 and 15 had

similar toxicity profiles with absence of toxicity G4 and had less side effects compared to the standard scheme with CDDP on day 1 and G on day 1 and 8 used in the literature.

Table 1.

TOXICITY	C/G (123 p)			C/P(40 p)		
	GI	GII	GIII	GI	GII	GIII
Neutropenia	25(20.7%)	28 (6.2%)	10 (8,1%)	19 (47,5)%	9(22,5%)	5(12,5%)
Anemia	29 (6.5%)	25 (5.6%)	6 (1.3%)	12 (30%)	5 (12,5%)	3 (7,5%)
Thrombocytopenia	26(21.13%)	48(36.09%)	13 (10.5%)	8 (20%)	3 (7,5%)	0
Fatigue	24(19,5%)	35 (28,4%)	8 (6,5%)	8 (20%)	14(35%)	3(7,5%)
Nausea	18 (12.1%)	10 (8.1%)	1 (0.8%)	3 (7,5%)	4 (10%)	0
Hepatictoxicity	7 (5.6%)	2 (1,6)	0	5 (15%)	3 (7,5%)	0
Renaltoxicity	8 (6.5%)	3(2.4%)	0	2 (5%)	0	0

References

1. Hotta K, Matsuo K, Ueoka H, et al (2004) The addition of platinum compounds to a new agent in patients with advanced lung cancer non-small cell. A literature based meta-analysis of randomized trials. Ann Oncol 15: 1782-1789.
2. Belani CP, Lee JS, Socinski MA, et al. (2005) randomized Phase III compares the cisplatin-etoposide with carboplatin-paclitaxel in advanced or metastatic non-small cell lung cancer cells. Ann Oncol 16: 1069-1075.
3. P.A. DiSilvestro, S.C. Rubin, L.P. Martin, S.A. Davidson, W.K. Huh, D.M. O'Malley, M.P. Boente, Michael H., and B. J. . Monk, Belani CP, Pereira JR, von Pawel J, et al (2006) Effect of chemotherapy for advanced non-small cell lung cancer cells in the patient's quality of life: a randomized controlled trial. Lung Cancer 53: 231 - 239.
4. Zatloukal P, Petruzelka L, Zemanova M, et al (2003) Gemcitabine plus cisplatin versus gemcitabine and carboplatin in stage IIIb and IV non-small cell lung cancer: a randomized phase III trial. Lung Cancer 41: 321 - 33.1.
5. Ardizzoni A, Boni L, Tiseo M, et al (2007) cisplatin versus carboplatin-based chemotherapy in first-line treatment of advanced non-small lung cancer cells. A patient data meta-analysis individually. J Natl Cancer Inst 99: 847-857.

6. Richardet E, De La Collina M, L Carranza, Taddei E, Di Notto M, Espinosa F, S Rodriguez, Martinez L, Bertoncin A, Fernandez M, Bella S: Phase II study: weekly cisplatin (C) and gemcitabine (G) for stage IIIB-IV of NSCLC. Proc ASCO, 2711A, 2002.