Induction Therapy (IT) of non small cell lung cancer (NSCLC) with reliable response rate and low treatment related morbidity and mortality, a phase II study

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Background: Although the only known curative therapy for NSCLC remains to be surgical intervention, the survival results leave much to be desired. We have collaborated for the past decades in developing effective IT for the loco-regional NSCLC. In order to improve the overall survival using IT, we need to look for a regimen which produces a reliable response rate with a low treatment related morbidity and mortality.

Methods: Patients with NSCLC in clinical stages IB, IIA and B, IIIA and B received a course of IT with 20 Gy of radiation therapy in 2 weeks. This was followed by 2 courses of chemotherapy consisting of paclitaxel 180 mg/m2, cisplatin 45 mg/m2, and ifosfamide 1,000 mg/m2. Two to three weeks after the chemotherapy, the patients were reevaluated and if suitable underwent surgical therapy.

Results: From March 2000 to July 2004, a total of 35 patients were entered into the study. The overall response rate was 82.86% (95% confidence interval, 66.35-94.5%). Complete response (CR) was 20 % (95% confidence interval, 8.44-36.94%). Twenty five patients subsequently had the surgical resection (7 patients with CR was not operated). The median follow up is 30 months. In 12 patients with stage IB, IIA and B, the median survival is 61 months and the 3 year survival was 63 % (Fig 1). In 23 patients with stage IIIA and B the median survival was 26 months and the 3 year survival was 30 % (Fig 2).

There was no post operative mortality, but was one mortality of post radiation therapy pneumonitis.

Conclusions: The regimen produced a high-response rate with low treatment related morbidity and mortality. Therefore, it is a suitable regimen for IT, specially for the stage IB, IIA and B NSCLC.

Radiation therapy concurrent with cisplatin and vinblastine in locally advanced non small cell lung cancer

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Background: Thoracic radiotherapy plays pivotal role in the treatment of advanced NSCLC. Over the years, new treatment schedules have been evaluated, but an ideal treatment schedule is still awaited. The present trial was designed to evaluate the efficacy of Cisplatin (C) and Vinblastine (V) concurrent with RT compared to RT alone in locally advanced unresectable NSCLC.

Methods: Sixty patients of stage III NSCLC were enrolled into the study. Patients were divided into 2 groups of 30 patients each. The CVRT group patients received external radiotherapy 60Gy in 30 fractions, 5 days a week over 6 weeks by conventional daily dose fractionation schedule concurrently with Cisplatin 75mg/m2 intravenously given starting on day 1 of radiation therapy for 5 courses at 3 weeks interval and vinblastine 5mg/m2 given weekly for 5 courses starting on day 1 of radiation. RT group patients received only conventional external radiotherapy 60Gy in 30 fractions, 5 days a week over 6 weeks.

Results: At the end of treatment tumor response was observed in 53.5% patients (20% CR; 33.5% PR) in CVRT group as compared to 47% patients (all PR) in the RT group. Severe toxicities observed were esophagitis (grade 3) in 6 patients (4 in CVRT group & 2 in RT group and leucopenia in 5 patients in CVRT group. One year survival rates are 40% and 51% in RT and CVRT groups respectively.

Conclusion: In conclusion chemotherapy with Cisplatin and vinblastine given concurrently with thoracic radiation has encouraging activity and is a relatively safe regimen.