ABSTRACT

A PROSPECTIVE STUDY OF EARLIER PREDICTION OF LUNG TOXICITY IN PATIENTS RECEIVING BLEOMYCIN FOR HODGKIN'S LYMPHOMA & GERMCELL TUMOURS

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BACKGROUND

Bleomycin is one of the important chemotherapy commonly given for the treatment of Hodgkin lymphoma and germ-cell tumours, the most highly curable cancers . But bleomycin can cause severe life-threatening lung injury, which ranges from hypersensitivity pneumonitis and bronchiolitis obliterans organizing pneumonia (BOOP) to acute interstitial pneumonia and progressive pulmonary fibrosis

Hence early diagnosis , treatment, and prevention of limiting toxicities such as bleomycin-induced lung injury, is very important. This study aims at of earlier prediction of bleomycin induced lung toxicity in hodgkin's lymphoma & germcell tumours

AIMS AND OBJECTIVES: To identify the patients developing lung toxicity for Bleomycin in hodgkin's lymphoma and germcell tumourby PFT and HRCT.

MATERIALS AND METHODS:

STUDY POPULATION: The study is conducted on 30 patients admitted to Government Rajaji Hospital & Madurai Medical College during the study period from March 2018 to August 2018.Inclusion criteria:Newly diagnosed Hodgkins lymphoma and germ cell tumour patients with age more than 18 years confirmed by histopathological examination and immunohistochemistry.Exclusion criteria**:**

Underlying lung disease **.**METHOD OF DATA COLLECTION:Hodgkin's lymphoma and germ cell tumour patients of varying age and sex were selected their consent was taken. The history was elicited. Age, height weight were recorded. Thorough clinical examination were carried out. DESIGN OF STUDY:Prospective and observational study.PERIOD OF STUDY:6 months (March 2018 to August 2018)The performance of baseline PFT was carried out. In all the patients relevant information will be collected in a predesigned proforma. The patients are selected based on clinical examinations, histopathological examination and immunohistochemistry. The patients are followed over a period of 6 months with pulmonary function test and HRCT at regular intervals.Complete blood count,Liver function test,Renal function test, Sputum AFB,Sputum Culture and

sensitivity,HPE,IHC, Chest X ray,PFT, HRCT will be done in all patients to screen for pre existing lung disease.

RESULT: Totally 30 patients among which 18 hodgkin's lymphoma and 12 germ cell tumour patients admitted in the Govt Rajaji Hospital were studied for bleomycin induced lung toxicity during march 2018 to August 2018.

Selected patients were free from previous lung disease as screened by PFT and HRCT. After completing the course of chemotherapy for HL and GCT patients they were assessed. 12 patients developed symptoms among which 9 had dry cough and 3 had dyspnoea.All patients were subjected to PFT at the end of the treatment. 9 of them developed abnormal PFT in the form of obstruction in 5 patients, restrictive pattern in 3 patients and mixed form in 1 patient. When HRCT was repeated for these patients they did not show any abnormality.

Since bleomycin toxicity is not only dose dependent these patients have to be further followed up from earlier course of treatment to a minimum of 2 years for earlier identification of bleomycin induced toxicity.

CONCLUSION Bleomycin-induced lung injury is a major pulmonary toxicity. The mortality of this complication is high, ranging from 10 to 20%, and significantly impacts quality of life and five-year overall survival. The diagnosis of interstitial lung disease and BIP is particularly challenging and often depends on clinical, radiological, and cytological findings. Progress in understanding the

mechanisms behind the therapeutic efficacy and unwanted toxicity of bleomycin, as well as elucidation of its biosynthetic pathway, may lead to the development of agents capable of preventing or treating BIP. Until then, physicians administrating bleomycin should be aware of potential lung toxicity, especially in the presence of risk factors.

KEYWORDS : Bleomycin, Lung toxicity, Hodgkin's lymphoma, Germ cell tumour