

Bleomycin and Oxytetracycline Sclerotherapy for Malignant Pleural Effusions

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Sir,

We report our experience with the use of bleomycin and oxytetracycline for chemical pleurodesis in the management of symptomatic malignant pleural effusions at the University of Malaya Medical Centre from December 1996 to November 1998. Thirteen patients (median age, 51 years; range, 31 to 77 years) with malignant pleural effusions were treated by chest tube drainage followed by sclerotherapy using bleomycin in eight patients and oxytetracycline in five. The causes of malignant pleural effusions included lung cancer in eight patients and non-Hodgkin's lymphoma, nasopharyngeal carcinoma, squamous cell carcinoma of the uterine cervix, renal pelvis transitional cell carcinoma, and adenocarcinoma of unknown primary site in one patient each. The most common symptoms, dyspnoea and cough were experienced by all 13 patients and 10 patients, respectively.

Bleomycin was used during the initial period from December 1996. Oxytetracycline, which is much cheaper than bleomycin, was used from March 1998 onwards when it became available. The dose of bleomycin used was 1mg/kg body weight (maximum 60 mg) and that of oxytetracycline was 20mg/kg (maximum 1 gm)¹. From the time of insertion to removal following sclerotherapy, the chest tubes remained in place for a median total duration of 6.5 days (range, 2 - 18.5 days). This is similar to the average of 6.6 days for bleomycin sclerotherapy patients and 6.5 days for tetracycline sclerotherapy patients reported by others². Sclerotherapy was well tolerated by the patients

with the most common adverse effects being fever (experienced by three of eight bleomycin sclerotherapy patients and three of five oxytetracycline sclerotherapy patients) and chest pain (three bleomycin sclerotherapy patients and two oxytetracycline sclerotherapy patients).

Two patients died from progressive terminal cancer 14 and eight days, respectively after sclerotherapy. Three patients were discharged from hospital within a month of sclerotherapy and were not given any follow-up appointment because of terminal disease. Of eight patients (six after bleomycin and two after oxytetracycline sclerotherapy) who were followed-up at one month following sclerotherapy, four bleomycin sclerotherapy patients had chest radiographs which did not show pleural fluid re-accumulation (complete response) while the radiographs of the remaining two bleomycin sclerotherapy patients and both oxytetracycline sclerotherapy patients revealed some pleural fluid re-accumulation which did not require thoracentesis (partial response).

Bleomycin was found to be superior to tetracycline in the only randomised trial for treatment of malignant pleural effusions reported by Ruckdeschel *et al*³ in 1991. Apart from a lower recurrence rate following bleomycin sclerotherapy, the median time of effusion recurrence was also significantly prolonged for bleomycin, 46 days versus 32 days for tetracycline. The major drawback of bleomycin is cost. In Malaysia, each 15mg vial of bleomycin costs RM98 while oxytetracycline only costs RM1.70 per 500mg vial.

References

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