Radiotherapy is unnecessary in elderly patients with localized aggressive non-Hodgkin lymphoma: results of the LNH 93-4 study

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CHOP combined with radiotherapy is considered as the standard treatment for localized aggressive non-Hodgkin lymphoma (NHL) (Müller et al. NEJM 1998, 339:21, Tanam et al. JCO 2003, 20:197). However, no prospective randomized trial has compared chemotherapy alone to the same chemotherapy plus involved field radiotherapy (IFRT).

The LNH 93-4 study compared 4 courses of CHOP to 4 courses of CHOP followed by 40 Gy involved-field radiotherapy in patients ≥ 60 years with localized good prognosis aggressive NHL. (a factor in the age-adjusted IFI score). At randomization, patients were stratified on bulk (< vs ≥ 10 cm).

From 65/83 to 64/81, 528 pts were included and 464 were eligible for analysis. Forty-five percent of patients were ≥ 70 yrs of age or older.

Clinical characteristics were well balanced between the 2 treatment groups: median age 68 yrs, stage I 66%, bulky disease 10%, T-cell phenotype 8%, 50% pts had extramodal sites of disease. Complete response at the end of treatment was identical in both groups (89% and 91% respectively). Fatal toxicity occurred in 2% of both groups. With a median follow up of 49 months, the 3 yrs event-free survival (EFS) and the 3 yrs overall survival (OS) did not differ significantly (60% for CHOP alone vs 61% for CHOP plus IFRT, p = 0.6 and 70% for CHOP alone vs 67% for CHOP plus IFRT, p = 0.1).

When patients of both arms were split into subgroups according to age (60-64 yrs, 65-69 yrs, 70-74 yrs, 75 yrs and over), the CR rate was the same in the different age groups. However, for patients over 69 yrs, the OS was better in the group treated by chemo only (p < 0.02).

We conclude that in limited stages of disease, 4 cycles of standard-dose CHOP alone produce acceptable CR and survival rates in elderly patients with little life threatening toxicity. Involved field radiotherapy following chemotherapy does not increase CR rate, EFS or OS. On the contrary, in pts over 69 yrs, radiotherapy following chemo might have a negative impact on survival.