Outcome of older patients with b-large cell lymphoma (b-lcl) – an observational study of KroHem, the Croatian cooperative group for hematologic diseases

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proportions and due to an aging population the incidence of cancer is also increasing. To ensure good patient outcomes it is imperative that we optimally treat obese patients, particularly in the curative setting for diseases such as diffuse large B-cell lymphoma (DLBCL). In 2012 the American Society of Clinical Oncology (ASCO) released a Clinical Practice Guideline recommending that obese patients should be dosed on their full body weight. It is recognised however that clinicians in the UK continue to dose adjust (or 'cap' doses) in fear of excess toxicity.

Aims: This study aims to assess whether dosing on actual body weight in obese patients with R-CHOP chemotherapy for DLBCL affects relative total dose intensity of treatment (RTDI).

Methods: A retrospective analysis was performed of 77 consecutive patients who had received treatment with R-CHOP chemotherapy for DLBCL from 2006 to 2010. After exclusions for insufficient individual patient data or modifications to the regime *e.g.* addition of etoposide (R-CHOEP), the remaining number of patients for analysis was 66 (obese patients dosed on full body weight; n=18 and non-obese; n=48). Baseline characteristics were recorded. Weight and height measurements within 1 month of treatment initiation were used to calculate body surface area (BSA) and body mass index (BMI). Patients were defined as obese if BMI ≥30kg/m^2 as per WHO classification. IBW was calculated for obese patients using the BJ Devine formula. RTDI was calculated using previously published methods. It is the ratio of Actual Total Dose Intensity (ATDI) and Planned Total Dose Intensity (PTDI) expressed as a percentage *i.e.* RTDI (%)=ATDI/ PTDIx100. PTDI is the planned dose intensity over the entire treatment duration, averaged across the chemotherapy agents used. For permanent treatment discontinuation for a reason other than disease progression, relapse or death, the remaining cycles are calculated with planned length and zero dose. In cases of disease progression, relapse or death PTDI is calculated based on number of cycles completed. ATDI is the actual average dose intensity over the real treatment duration *i.e.* actual total dose (mg)/duration of therapy (weeks). RTDI therefore takes into account the effects of treatment delays as well as dose reductions, and premature cessation of therapy due to reasons other than disease progression or death. It is a surrogate marker of survival and multiple studies have demonstrated that achieving an average RTDI >90% is associated with improved long term outcomes. The chi squared test for trend was used to test for a trend in the number of patients being dose reduced at baseline between the two groups. Univariate analysis was performed for age, gender, performance status (PS), baseline characteristics including renal function, hepatic function, full blood count, line of treatment, and GCSF usage using chi-squared tests, t-tests and Mann-Whitney tests. Multivariable linear regression was performed to adjust for confounding factors.

Results: Before adjusting for confounding factors, there was a non-significant difference in average RTDI for R-CHOP between obese and non-obese patients of 7.22%. After adjusting for age, gender, performance status, and whether patients were dose modified in the 1st cycle, a multivariable linear regression showed a reduction in this difference to 5.67% . There was no evidence to suggest a difference in RTDI between the two groups (Table 1).

Table 1.

	Obese N=18	Control (non-obese) N=48	P-value
Average RTDI Mean (sd%)	94.05 (7.13)	86.83 (16.05)	0.071 (t-test)

Summary/Conclusions: These findings, although of limited value due to small patient numbers, would reassure clinicians and pharmacists that full weight based dosing in obese patients should not lead to excess toxicity. In conjunction with the broader published literature and ASCO's Clinical Practice Guideline they support dosing on actual body weight for R-CHOP for obese patients with DLBCL.

PB1727

OUTCOME OF OLDER PATIENTS WITH B-LARGE CELL LYMPHOMA (B-LCL) – AN OBSERVATIONAL STUDY OF KROHEM, THE CROATIAN COOPERATIVE GROUP FOR HEMATOLOGICAL DISEASES

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Background: Approximately half of the patients with diffuse large B-cell lymphoma (DLBCL) are older than 60 years and their outcome is inferior in comparison to younger patients.

Aims: We aimed to assess the impact of age, risk factors and the type of treatment on event-free survival (EFS) and overall survival (OS).

Methods: In this retrospective study, 304 patients with DLBCL older than 60 years or equal were included. A total of 218 patients were included in an observational study of patients treated with rituximab conducted at 15 general and university hospitals in 2007 and 2008. Additional patients were recruited from two clinical centers.

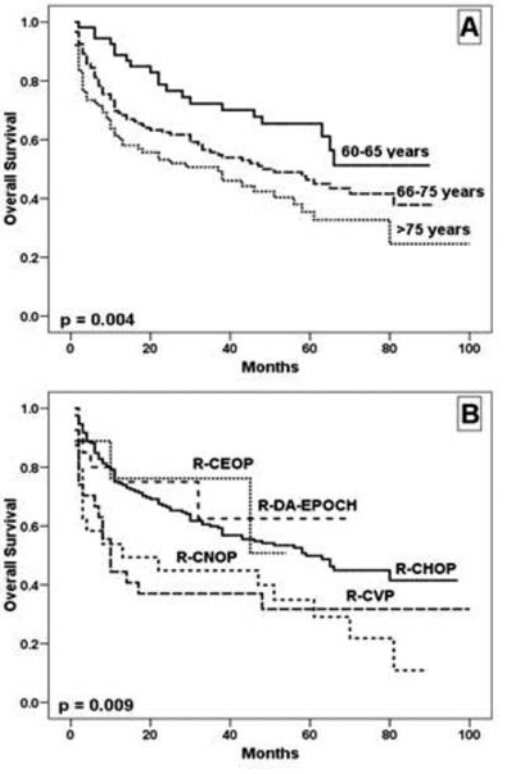

Figure 1.

Results: The median age was 73 years (range 60-90), 144 were men and 160 women. 205 patients were treated with R-CHOP, 27 with R-CVP, 24 with R-CNOP (mitoxantrone instead of doxorubicin), 20 with R-DA-EPOCH, 9 with R-CEOP (etoposide instead of doxorubicin), and 19 patients received other regimens or no chemotherapy. After a median follow up of 52 months for survivors, the estimated 5-year EFS and 5-year OS were 43% and 47%, respectively. Half of the patients are alive at the time of last follow up. Lymphoma, infections, and cardiac events were the leading causes of death. A total of 52% patients died during first-line treatment, 24% died in remission, and 24% died in relapse. There were 16 secondary malignancies reported. The aaIPI significantly correlated with EFS (p=0.002) and OS (p=0.001). Gender, bulky disease (>5cm), and extranodal involvement were not associated with survival, whereas B symptoms were significantly predictive of EFS (p=0.002) and OS (p<0.001). Age had a negative impact on survival: patients between 60 and 65 years fared well (5-year OS 65%), patients from 66 to 75 years of age worse (5-year OS 46%), and those older than 75 years the worst (5-year OS 38%); p=0.004 (Figure 1A). Treatment choice also influenced EFS and OS: R-CVP and R-CNOP had worst outcomes worst, whereas those of R-CEOP and R-DA-EPOCH were at least comparable to R-CHOP; p=0.025 for EFS, p=0.009 for OS (Figure 1B).

Summary/Conclusions: R-CHOP remains the standard of care in elderly patients with B-LCL. The aaIPI and presence of B symptoms influence prognosis. Survival decreases with age; cut-offs at 65 and 75 years are discriminative. R-CNOP has only modest efficacy, similar to R-CVP. Etoposide may serve as an alternative to anthracyclines for patients with cardiac comorbidities, and R-DA-EPOCH may represent a good option for high-risk patients.

PB1728

TREATMENT TOXICITIES AND OUTCOME OF AN INTENSIVE IMMUNOCHEMOTHERAPY REGIMEN (FAB LMB96) FOR ADULT AGGRESSIVE B CELL NON-HODGKIN LYMPHOMAS (BNHL) AT RISK FOR OR WITH CENTRAL NERVOUS SYSTEM INFILTRATION

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Background: The treatment of diffuse large B cell lymphomas (DLBCL) at risk for CNS infiltration is not well established but may benefit of regimens including systemic drugs crossing the blood-brain barrier. Furthermore, different studies have showed that patients with lymphomas with features intermediate between DLBCL and Burkitt (Int-BNHL) and MYC-rearranged lymphomas have inferior