Bendamustine treatment in refractory/relapsed T cell lymphomas: a retrospective multicenter study

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Introduction

Peripheral T-cell lymphoma (PTCL) is an aggressive disease with poor outcome. First line therapies are usually unsatisfactory with frequent relapses. Median progression free survival (PFS) and overall survival (OS) for relapse PTCL patients are very short [1] with few available therapeutic options. Bendamustine has been shown to be effective in this setting [2-4].

Methods

In order to assess the efficacy of bendamustine outside clinical trials, we conducted a national retrospective study of patients with the diagnosis of PTCL and who were treated with bendamustine. Between 2011 and 2013, about 200 patients with the diagnosis of PTCL have been treated with bendamustine. We present the results of the first 96 patients with complete clinical and biological data.

Results

Population caracteristics'

The population median age was 65y (range 28-89) with a male/female sex ratio of 1.3 (55/41). Histologies were: angio-immunoblastic (AILT=43), not otherwise specified (PTCL-nos=31), anaplasic-large (ALCL=9), mycosis fungoide (MF=4) (table 1). The median number of chemotherapy lines prior to bendamustine was 2 (range 0-5). The median duration of response (DoR) after the last chemotherapy was 4.6 months (range 1-71) and 47% of patients had refractory disease at bendamustine treatment.

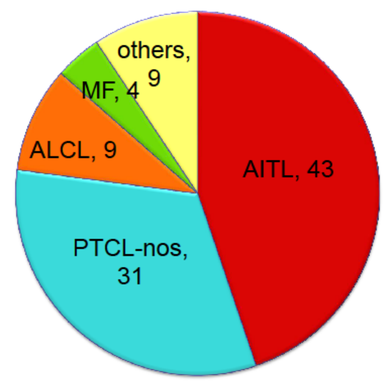

Figure 1: Histological diagnosis'

Response (n = 96)	n	%
Overall Response Rate CR+PR	**33**	**36**
Complete response (CR)	25	27
Partial response (PR)	13	9
Stable	2	3
Progressive	56	61
Duration of response; median (months)	**5.1** (1 – 49)	

Table 1: Response to Bendamustine

Table 2 : ORR according to key subsets

Characteristics	N	Overall Response Rate	
		%	p
Age (years)			
<65	47	29	0.13
≥65	49	46	
Histology			
AITL	43	53	**0.01**
PTCL-nos	31	23	
Status prior to bendamustine			
Sensitive	51	53	**0.03**
Refractory	45	21	
N° of prior lines			
1 line	36	51	**0.04**
≥ 2 lines	60	30	
Bone marrow involvement			
yes	36	31	0.9
no	43	48	

Efficacy

Fifty-three percent of patients received fewer than 3 cycles, mostly because of disease progression. Overall, they received a median of 2 cycles (range 1-6) at a median dose of 90mg/m2 (range 40-150).
The best overall response rate (ORR) was 36% (33/96) with 27% of complete response (CR=25) (Table 1). The median DoR was 5.1 months (1-49). In AITL patients, ORR was 53% (23/43) with 42% of CR. In patients with PTCL-nos, ORR was 20% (6/31) with 13% of CR (Table 2). Median PFS was 3.9 months (IC_{95} 2.7-5.1) and median OS was 5.7 months (IC_{95} 4.0-7.4) (Figure 2 A-B).

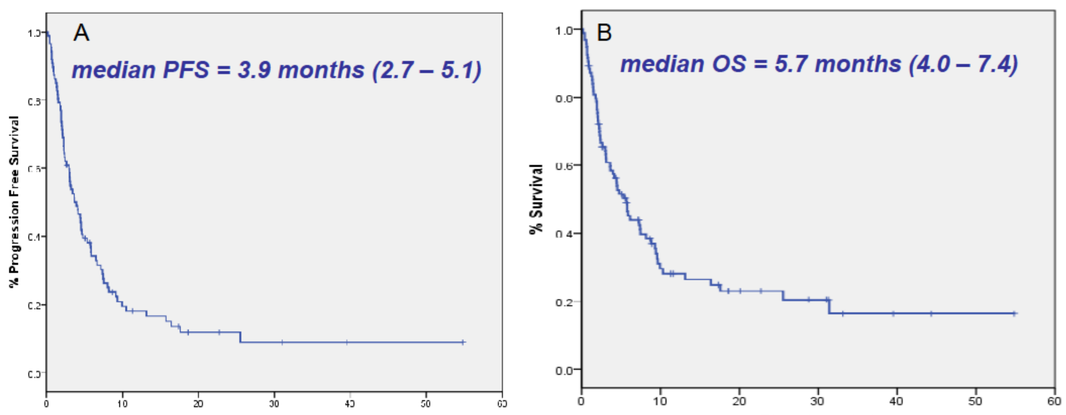

Figure 2: PFS (A) and OS (B) in intent to treat population n=96

Toxicity

With a median follow up 5.7 months (1-55), 71% of patients (68/96) died. The causes of death were: disease progression (94%) or toxicities (6%). Grade ¾ thrombocytopenia, neutropenia and infections occurred in 20%, 14% and 15% of cases, respectively.

Conclusion

Bendamustine as single agent must be considered as a therapeutic option for relapsed or refractory PTCL. The safety profile was good. Combination of bendamustine with other drugs needs to be evaluated.

Keywords: T cell lymphoma - bendamustine

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