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PROGNOSTIC FACTORS, LINES OF TREATMENT, AND OUTCOME OF RELAPSED PEDIATRIC LYMPHOBLASTIC LYMPHOMA IN CHILDREN'S CANCER HOSPITAL EGYPT

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INTRODUCTION

The treatment of children with T-cell and B-cell lymphoblastic lymphoma mimics the treatment of acute lymphoblastic leukemia with 5-year overall survival rate of 80% to-90%.pdiatric patients with relapsed or refractory lymphoblastic lymphoma still have a poor prognosis. Several chemotherapy regimens are used as a treatment of relapsed lymphoblastic lymphoma followed by hematopoietic stem cell transplantation (HSCT) post-second complete remission (CR2).

AIM

we aimed to evaluate the prognostic factors of chemotherapy used as a second line post relapse, role of hematopoietic stem cell transplantation, and overall survival of relapsed pediatric T-cell or precursor B-cell lymphoblastic lymphoma in Children's Cancer Hospital Egypt.

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METHOD

This retrospective study included 38 pediatric patients who had relapsed out off 295 patients (12.8%) with LBL in CCHE from July 2007 until July 2020 The median follow up period was 59.4 months. . Males were 68.4% of the study patients , with a median age of 9.3 years. All patients received St. Jude Total XV protocol of for acute lymphoblastic leukemia

RESULTS

Initially, the patients' gender, , pathological subtype, initial stage , central nervous system or bone marrow infiltration, and early response to induction treatment did not have an impact on relapse-free survival. Early relapse was documented in 89.47% of patients with a 3-year OS of 5.8% and an OS of 75% for patients with late relapse (*P*=0.01). Hematological or CNS relapse did not affect the outcome of the patients. Seventeen patients (44.7%) received FLAG-M as a salvage protocol with a 3-year OS of 0%, and re-induction R16 was given to 17 patients (44.7%) with a 3- year OS of 17.6%; *P*- value was significant . Sixteen patients (42%) had complete response post second ine therapy with a 3-year OS of 31.2%, but 34.4% developed a second relapse, and then 84.4% of patients died of active disease. Allogenic bone marrow transplant was done for only 2 patients (*P*=0.1.).

		Survival status		P value	Number	Events	3y OS	P value
		Alive	Dead					
Time of relapse	Early	2	32	0.000	34	32	5.8%	0.01
	Late	3	1		4	1	75%	
Site group	Multiple	0	6	0.2	6	6	0%	0.4
	Single	5	27		32	27	37.5%	
Bone marrow biopsy relapse	Free	4	22	0.9	26	22	42.3%	0.6
	Positive	1	6		7	6	14.3%	
Bone marrow aspirate infiltration at	Negative	4	23	0.6	27	23	44.4%	0.4
	Positive	1	10		11	10	18.2%	
relapse CNS relapse	Positive	0	4	0.4	4	4	0%	0.2
	negative	5	29		34	29	38.2%	
Chemotherapy	FLAG/M	0	17	0.07	17	17	0%	0.00
	R 16 PROTOCOL REINDUCTION	3	14		17	14	17.6%	
Response post salvage	CR	5	11	0.00	16	11	31.2%	0.00
	No response	0	22		22	22	0%	
Transplant	NO	4	32	0.1	36	32	11.1%	0.2
	Yes	1	1		2	1	50%	

CONCLUSIONS

Early relapse and poor response to salvage chemotherapy worsen the outcome of relapsed pediatric LB. Giving re-induction R16 protocol, followed by allogeneic HSCT, improves the outcome.

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