HAIRY CELL LEUKEMIA: LONG TERM RESPONSE TO CLADRIBINE.

Anup J Devasia, Anu Korula, Ansu Abu Alex, Uday Kulkarni, Fouzia NA, Aby Abraham, Alok Srivastava, Biju George, Poonkuzhali Balasubramanyam, Vikram Mathews
Department of Hematology, Christian Medical College, Vellore, India.

INTRODUCTION

Hairy cell leukemia (HCL) is an indolent B cell neoplasm characterised by constitutive cell proliferation signalling secondary to a point mutation in the BRAF (V600E). Pancytopenia, organomegaly & immunosuppression are hallmarks of HCL. Response to purine analogue based therapy is excellent in the classical variant of HCL. Long term overall survival (OS) ranging from 80-90%.

PATIENTS AND METHODS

Retrospective analysis of patients diagnosed with Hairy cell Leukemia at CMC, Vellore, India between January 2001-December 2017.

Diagnosis based on :
Peripheral blood
Bone marrow morphology,
Special stains (TRAP),
Trephine biopsy with IHC
Flow cytometry
BRAF mutation

RESULTS

74 patients (70 males & 4 females) with Classical HCL
5 patients (4 males & 1 female) with variant HCL

BASELINE CHARACTERISTICS OF PATIENTS WITH CLASSICAL HAIRY CELL LEUKEMIA	
Median age (yrs.)	49(30-70)
Symptomatic	68/74 (92%)
Duration of symptoms (months)	3 (1-24)
Common symptoms	
Fatigue	55/74 (77%)
Fever	31/74 (42%)
Organomegaly	
Hepatomegaly	27 (36%)
Splenomegaly	56 (76%)
Cytopenia in 2 cell lines	45/74 (61%)
Hairy cells in peripheral blood	29/74 (39%)
TRAP stain positive	51/60 (89%)
DBA44 positive	43/56 (77%)
Annexin A positive	34/37 (92%)
BRAF V600E (allelic PCR) mutation	32/32 (100%)

TREATMENT OF RELAPSED PATIENTS	
5 patients relapsed at a median of 73 (36-104) months	
Repeat Cladribine	4/5
Cladribine + Rituximab	1
1 patient had a second relapse 2 years after salvage Cladribine, salvaged with Cladribine , died in cytopenia with fungal pneumonia	

VARIANT HAIRY CELL LEUKEMIA (n=5)	
Median age	67 (39-83)
Therapy	
Splenectomy	3
Cladribine + Fludarabine + Rituximab	1
Followed up without treatment	1
3 in complete response	
1 in partial response	
1 patient relapsed after splenectomy, opted for palliation	

TREATMENT OF PATIENTS WITH CLASSICAL HAIRY CELL LEUKEMIA	
Treatment given	
Cladribine	53/74 (72%)
Splenectomy	2
No treatment, followed up	1
Opted for treatment elsewhere	19
CLADRIBINE THERAPY	
Febrile Neutropenia	44/53 (83%)
Median time to ANC >1000	22 (10-157)
Median time to platelets >100000 (days)	17 (6-29)
Median duration of hospital stay	22 (8-40)
RESPONSE TO CLADRIBINE THERAPY	
Complete response in 48 patients	Partial response in 1 patient
5 patients died , all secondary to multidrug resistant Gram negative sepsis

5 year EFS is 85.4 ± 6.8%.

5 year OS is 94.3 ± 3.2 %

CONCLUSIONS

Long term responses are seen with single agent Cladribine therapy in Classical Hairy cell leukemia. Late relapses can still be managed with a repeat course of Cladribine. Mortality secondary to multidrug resistant gram negative bacterial sepsis remains a concern.

THE AUTHORS DECLARE NO CONFLICTS OF INTEREST