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Peripheral T Cell Lymphoma (PTCL) and Treatment Outcomes A Single Centre Retrospective Study

S. Samuel[1], B. Hennessy [1], S. Kumar [1], A. Bannaga[1], M. Griffin[2], M. Nur[2], E. Elhassadi [1]
[1]Haematology Department, University Hospital Waterford, Waterford, Ireland.
[2]Pathology Department, University Hospital Waterford, Waterford, Ireland.

Ospidéal Ollscoile Phort Láirge University Hospital Waterford Regional Cancer Centre South East
CANCER TRIALS WATERFORD
UCC University College Cork, Ireland Coláiste na hOllscoile Corcaigh
RCSI UNIVERSITY OF MEDICINE AND HEALTH SCIENCES

INTRODUCTION

Mature T-cell lymphomas comprise 15% to 20% of all aggressive non-Hodgkin lymphomas (NHL) and 5% to 10% of all NHLs. Peripheral T-cell lymphomas (PTCL) are a biologically diverse and uncommon group of diseases [1,2]. Compared to their B-cell counterparts, PTCLs remain largely unexplored and the optimal treatment ill-defined due to disease rarity and biological heterogeneity. Overall, the progressions/relapses of PTCLs are frequent (approximately 70% of patients), occur most often early (during the first year after initial diagnosis), and have a poor outcome, with a median OS of approximately 6 months [6-8].

AIM

This study retrospectively assesses treatment of patients that were diagnosed with aggressive T Cell NHL in a single centre over a time period from 2010 to 2020. The research scrutinizes 2- and 5-year progression-free survival (PFS) as well as the progressions/relapses of PTCL.

METHOD

Patients were identified through pathology database and informed consent obtained. Patient's demographic characteristics, clinical features, initial and subsequent treatment as well as survival were analysed. Treatment response , progression free survival (PFS) and overall survival (OS) were evaluated using KM curves. Multivariant (Age, gender, stage and disease sub-type) impact on treatment out-come were analysed using Log-rank (Mantel-Cox) test for statistical analysis.

RESULTS

- 27 patients were included in this study, with male predominance (70%) with a median age of 69 years (Rang 17-84 years). The majority with advanced disease (67%). The common histology subtype was ALCL in 10 patients (37%) (Alk-Neg =7 & Alk-Pos =3) followed by PTCL in 9 patients (33%). While EATL, AITL subtypes were reported in 5 (18%), 3 (11%) patients respectively.
- Chemotherapy was the mainstay of treatment in our cohort (26 patients / 96%) (CHOP based /19 patients, CHOEP in 4 patients, and GDP based /3 patients) and 1patient (4%) was not suitable for any therapy. Complete response (CR) was achieved in 16 patients (59%) and 8 patients (30%) subsequently relapsed, while reminder treated patients (10/37%) experienced disease progression.
- At relapse, GDP and Brentuximab Vedotin therapy were used for 8 and 3 patients respectively. This resulted in CR in 2 patients and progression disease in the remainder.
- Autologous bone marrow transplant consolidation was used in 3 patients (10%), and radiotherapy was used in 5 patients (15%). At the time of study data analysis (31/01/2023), 8 patients (30%) were still alive and 19 patient (70%) had died mostly lymphoma related death (18 patients).

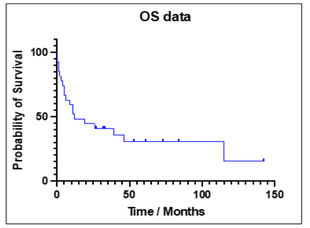


Figure 1A. OS Data

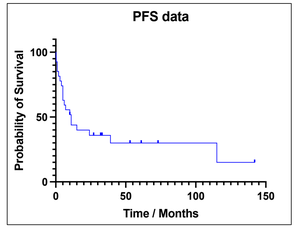


Figure 1B PFS Data

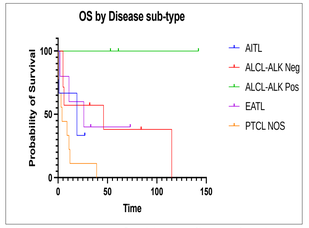


Figure 2: KM curves for OS according to the Disease sub-type

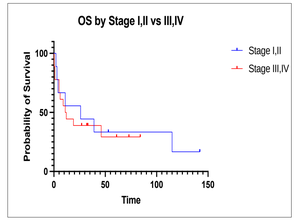


Figure 3: KM curves for OS according to the Disease stage

CONCLUSIONS

The study reflects real world data on peripheral T cell lymphoma and the impact of patient age and disease sub-type. We confirmed the previously reported poor prognosis of this disease with exception of ALCL ALK positive subtype. High grade T cell lymphoma continues to be a challenging disease to treat. Recent molecular understanding and availability of targeted therapy have resulted in some treatment out-come improvement and clinical trials enrolment are of great importance.

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CONTACT INFORMATION

Dr. Sylvia Samuel
Haematology department, University Hospital Waterford
Sylvia.samuel@hse.ie