Epidemiology, treatment and follow-up in peripheral T-cell lymphoma (PTCL) – a population-based perspective

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Background

Peripheral T-cell lymphomas (PTCLs) include four distinct subtypes with different clinical outcomes\(^1,2\). The anaplastic lymphoma kinase (ALK)-positive anaplastic large cell lymphoma (ALCL) has the most favourable 5-year overall survival (58-79 %), whereas poorer outcomes are seen for ALK-negative ALCL (OS 34-49 %), angioimmunoblastic T-cell lymphoma (14-36 %), and PTCL not otherwise specified (OS 28-35 %)\(^3,4\).

An anthracycline-containing treatment regimen is typically used in PTCL\(^3\), usually CHOP (cyclophosphamide, doxorubicin, vincristine, prednisone) or CHOEP (CHOP + etoposide). There is little evidence that different treatment approaches affects the outcome and due to the rarity of PTCL, prospective studies are lacking.

In the follow-up of PTCL in remission, no golden standard exists and there are for example large differences in the use of imaging\(^7\).

Methods

Adult patients from the Swedish Lymphoma Registry (SLR) and the Danish Lymphoma Group Registry (LYFO) were included in the studies. These registries cover >90% of adult patients with lymphoma in Denmark and Sweden\(^8,9\).

Paper I includes 122 patients with ALK+ ALCL diagnosed between 2000 and 2010, and paper II includes 232 patients with PTCL in complete remission after receiving CHOP or CHOEP, diagnosed between 2007 and 2012.

Preliminary results

Paper I: Our data demonstrates that the addition of etoposide to CHOP in the treatment of ALK+ ALCL is associated with improved survival in the age group 41-65 years.

Paper II: The results from our study shows no benefit with regards to survival in PTCL patients with follow-up including routine imaging.

Significance

Paper I provides results from a large population-based cohort of ALK+ ALCL patients, to our knowledge the largest cohort published so far. Demonstrating that CHOEP treatment is associated with favourable outcome in this large cohort is of importance since results from prospective randomized trials are lacking.
Paper II could not demonstrate any difference in survival between patients with or without routine imaging in the follow-up of PTCL. This result has been used in the discussion of future national PTCL protocols in Denmark and Sweden, and a likely decrease in the use of imaging will save money and imaging times for health care providers and anxiety for patients.

**Paper I**
The addition of etoposide to CHOP is associated with improved outcome in ALK+ adult anaplastic large cell lymphoma: A Nordic Lymphoma Group study
Henrik Cederleuf, Martin Bjerregård Pedersen, Mats Jerkeman, Thomas Relander, Francesco d'Amore, and Fredrik Ellin: Br J Haematol 178:739-746, 2017

**Paper II**
Outcome of peripheral T-cell lymphoma in first complete remission: a Danish-Swedish population-based study