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POSTER ABSTRACTS

626.AGGRESSIVE LYMPHOMAS: PROSPECTIVE THERAPEUTIC TRIALS

Pembrolizumab in Relapsed/Refractory Extranodal NK/T Cell Lymphoma and Mature T Cell Lymphoma: A Prospective Phase II Study

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Background
Pembrolizumab, a monoclonal antibody against programmed death 1 receptor (PD-1) has been shown to be efficacious in relapsed/refractory (R/R) extranodal NK/T cell lymphoma (ENKTL), with an overall response rate (ORR) up to 100% in retrospective case series [1]. In R/R mature T cell lymphoma, an overall response rate of 33% has been demonstrated in a phase II study [2]. In this prospective phase II study, we aim to evaluate the efficacy of pembrolizumab in patients with R/R mature T- and NK-cell lymphomas.
Methods
Patients with R/R mature T- and NK-cell lymphomas who failed at least one line of prior therapies were recruited. Pembrolizumab was administered at 200mg intravenously every three weeks for up to two years (35 cycles) unless there was intolerable toxicity or disease progression. PET/CT was performed after at least three cycles of treatment for response evaluation. The primary endpoints were the efficacy and safety of pembrolizumab treatment. Secondary endpoints included progression-free survival (PFS) and overall survival (OS). Response assessment was made according to published criteria [3]. Survival was analyzed using Kaplan-Meier method. Statistical calculations were performed with SPSS Statistics version 28.
Results
ENKTL cohort:
Ten women and six men at a median age of 57 (range: 41-83 years) were included. Fourteen patients had been treated with L-asparaginase-containing regimens. Ten patients (62.5%) had relapsed disease while six patients (37.5%) had refractory disease. Other relevant features included staging (I, N=3, 18.8%; II, N=3, 18.8%; IV, N=10, 62.5%). Response assessments were performed in all patients, and their best responses were as below: complete response (CR), N=7, 44%; partial response (PR), N=1, 6%; indeterminate response (IR), N=2, 13%; stable or progressive disease (SD/PD), N=6, 38%. At a median follow-up of 24 months (range 1-51 months), the median PFS was 10 months and the OS was 25 months (Figure 1). Adverse events included immunotherapy-related adverse events (IRAE) in five patients (31%), including two endocrine (one grade 1 and one grade 2 toxicity), two hepatic (both grade 2) and one gastrointestinal (grade 2). Haematological toxicity was mild with one patient having grade 1 anaemia.
Mature T-cell lymphomas cohort:
Four men and four women at a median age of 60 (range: 22-80 years) were included. Underlying diseases were peripheral T cell lymphoma, not otherwise specified (PTCL-NOS) (N=4, 50%), angioimmunoblastic T-cell lymphoma/PTCL with T-follicular helper phenotype (AITL/PTCL-TFH) (N=2, 25%), hepatosplenic T-cell lymphoma (HSTCL) (N=1, 12.5%) and systemic Epstein-Barr Virus (EBV)-positive T cell lymphoma of childhood (N=1, 12.5%). All patients had advanced-stage diseases (stage 3, N=1, 12.5%; stage 4, N=7, 87.5%). The median line of the prior regimens was 2 (range: 1-3). Response assessment was performed in seven patients, and their best responses were as follows: CR, N=1, 14.2%; IR, N=2, 28.4%; SD/PD, N=4, 57.1%. At a median follow-up period of nine months, the progression-free survival was 4 months and overall survival was 7 months. The only patient with a durable response was the one with systemic EBV-positive T-cell lymphoma of childhood. Toxicity included IRAE in two patients (endocrine, N=1, grade 1; pulmonary, N=1, grade 4) and haematological toxicity in three patients (37.5%) (anaemia, N=1, grade 2; neutropenia, N=1, grade 1; thrombocytopenia, N=1, grade 1).
Conclusion
Pembrolizumab is a safe and efficacious therapy for R/R ENKTL with potentially durable remission. In R/R mature T-cell lymphomas, the benefit of pembrolizumab treatment was limited. With the durable response observed in EBV-positive T-cell lymphoma of childhood, the use of pembrolizumab in EBV-positive T-cell lymphoma warrants further investigation.

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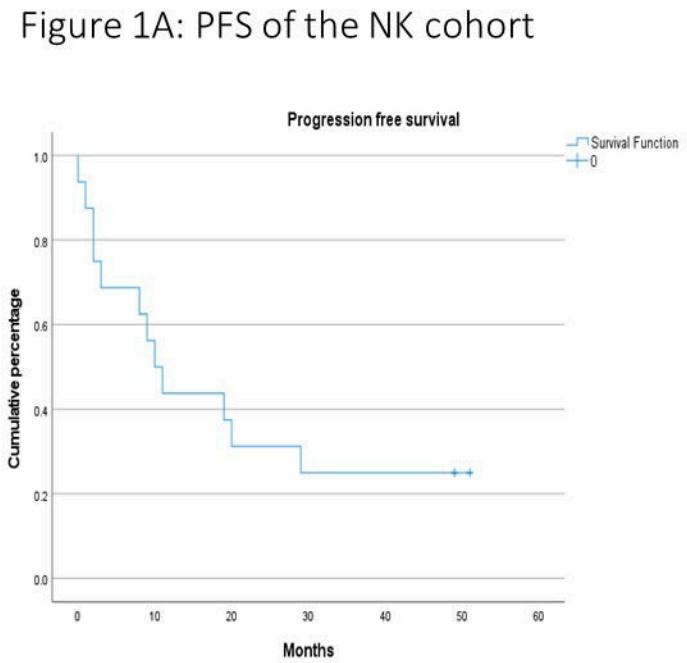

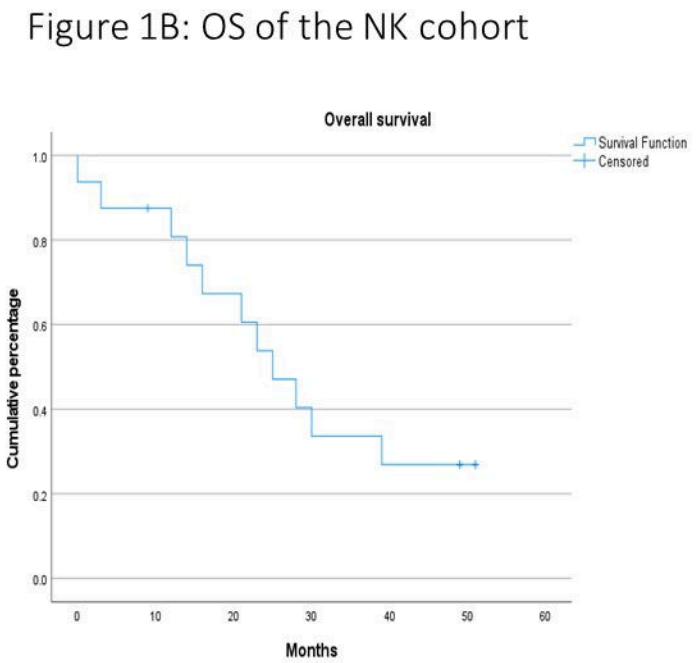

Figure 1

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