Study and summary of NK/T cell lymphoma from Lymphoma Diagnosis and Treatment Center in Henan province of China

Lymphoma Diagnosis and Treatment Center in Henan province was established in 2007 and supported by departments of oncology, radiotherapy, pathology, stem cell transplantation and other specialties in the first affiliated hospital of Zhengzhou University. Natural killer/T-cell lymphoma (NKTCL) is a subtype of non-Hodgkin’s lymphoma, which has a higher incidence in East-Asia compared with United States and Europe. In recent years, the center has done a lot of clinical and laboratorial research on NKTCL, and here we summarized as listed below: Firstly, we formulated a novel pegaspargase based chemotherapy regimen: dexamethasone, cisplatin, gemcitabine, pegaspargase (DDGP) and performed clinical trial (No. NCTO1501149). Of 118 patients enrolled, 90 patients were followed up for two years. 45 were treated with DDGP therapy, and 45 patients were treated with SMILE therapy. In conclusion, DDGP chemotherapy resulted in significant improvement in one-year PFS (84.4% versus 37.8%, P<0.001), two-year OS (71.1% versus 42.2%, P<0.001) and better tolerability compared with SMILE chemotherapy. Secondly, we have carried out high-throughput detections of genomics, transcriptome, and proteomics on NKTCL, and identified some recurrent gene alterations, differential expression genes and proteins which may act as potentially markers or targets. Thirdly, we also discussed and elucidate the mechanisms concerned with the better effect of DDGP on DNA damage, nucleic acid metabolism, and ATP-binding cassette transporters-dependent multidrug resistance. In addition, we are making great efforts to explore new approaches including hematopoietic stem cell transplantation with a unique induction chemotherapy and application of PD-1 immune checkpoint inhibitor, which greatly benefit the patients after chemotherapy failure.

Biography

Mingzhi Zhang completed his PhD at Zhengzhou University Medical School. He is the Director of Lymphoma Diagnosis and Treatment Center in Henan Province and in Department of Oncology, First Affiliated Hospital of Zhengzhou University. He has published more than 30 papers in reputed journals and achieved honors and awards on lymphoma research in China.

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