DISCUSSION:

- CD20 negative B cell non-Hodgkin lymphoma (NHL) is uncommon and accounts for 1-2% of B cell lymphomas. It poses a diagnostic and therapeutic dilemma. It accounts for a heterogeneous group of lymphoproliferative disorders.
- It is frequently associated with extranodal involvement, atypical cell morphology, aggressive clinical behaviour, resistance to standard chemotherapy and poor survival rates.
- The most CD20 negative lymphomas include plasmablastic lymphoma, primary effusion lymphoma, large B-cell lymphoma arising from HHV8-associated multicentric Castleman's disease, and ALK+ large B cell lymphoma. In addition to these, CD20 positive lymphoma can also relapse as CD20 negative lymphoma after CD20 antibody (Rituximab) therapy
- Molecular analysis using cytogenetics or FISH (fluorescent in-situ hybridization) to detect rearrangements or translocations of Bcl-2, Bcl-6 and MYC is an important part of diagnosis. BCL-2 mutation is common in human B cell lymphomas. Rearrangements or translocations of BCL-2, BCL-6 and/or MYC are hallmarks of "double-hit/ triple-hit" lymphomas which are typically more resistant to R-CHOP and are associated with poor prognosis. More intensive chemotherapy regimens and new agents like ibrutinib and lenalidomide have been shown to improve responses in such lymphomas
- Newer studies reveal that novel agents targeting B cell signalling pathways, such as, inhibitors of Bruton tyrosine kinase and phosphoinositol-3 kinase, may play an important role in the therapy of this rare entity. Role of PD-1 antibodies and BCL-2 inhibitors is also being investigated for the treatment of CD20 negative lymphomas.