CASE 086

CŌRE DIAGNOSTICS™

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ACKNOWLEDGEMENT: Dr. Shruti Sangwan, Ratan Singh.

CLINICAL HISTORY:

Patient is a 66year old male, who presented with splenomegaly and generalized lymphadenopathy and a supra-umblical nodule. He underwent further investigations (at outside hospital) for CBC, flow cytometry analysis, histopathological examination and cytogenetic analysis by Fluorescence in situ hybridization (FISH) technique.

CBC findings revealed Hb: 10.9g/dl, Platelet: 1,50,000/cu mm, TLC:8330/cu mm, with predominantly 58% lymphoid cells.

Bone marrow findings showed prominence of mature small lymphoid cells constituting ~50% of marrow nucleated cells with some of them showing irregular nuclear contours with indentation and rare having blastoid morphology. Biopsy showed intertrabecular and few paratrabecular lymphoid aggregates of small sized lymphoid cells. On IHC these aggregates showed positivity for cyclin-D1, CD5, CD20, suggestive of B-Non Hodgkin lymphoma, likely Mantle cell lymphoma.

Flow cytometry analysis revealed ~36% B lymphoid cells showing positivity for CD19 (moderate), CD20 (Bright), CD22 (Bright), CD5(moderate), surface IgM(moderate), Kappa(moderate), CD38(bright), likely Mantle cell lymphoma.

Supra-umblical nodule core needle biopsy showed sheets of atypical small lymphoid cells having round to ovoid, hyperchromatic nuclei, inconspicuous nucleoli and scanty cytoplasm. IHC on same showed positivity for CD20, CD5, cyclinD1, BCL-2, Ki-67 in 30-35% cells, diagnosed as Low grade B cell lymphoma favoring Mantle cell lymphoma.

FISH results showed IgH gene rearrangement t(11;14) with ATM gene (11q22) deletion in 51% interphase cells each analyzed. No evidence of TP53/RB1 gene deletion/Trisomy 12 was reported. The association of t(11;14) with ATM gene deletion is associated with poor prognosis. (Photograph 1&2)