EXCEPTIONAL RESPONDER TO IMMUNOTHERAPY-”A RARE CASE OF POST HSCT DLBCL RELAPSE RESPONDING TO NIVOLUMAB”.

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DISCLOSURE AND CONFLICTS OF INTEREST

- None
INTRODUCTION

- Diffuse large B-cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphoma.

- Approximately 60% of DLBCL patients are cured using standard chemotherapy that includes monoclonal anti-CD20 antibody (rituximab), cyclophosphamide, doxorubicin, vincristine, and prednisone (R-CHOP).

- However, 30–40% of DLBCL patients will develop relapse or have refractory disease that cannot be cured with the standard R-CHOP therapy, indicating the need for more effective therapies for this patient subset.
The development of rituximab was an early step in the application of immunotherapy for the treatment of lymphoma, as it was the first monoclonal antibody approved by the US-FDA for the patients with advanced stage or relapsed low-grade non-Hodgkin lymphoma, in 1997.

More recently, a number of innovative immunotherapy approaches have shown promising results in patients with relapsed or refractory DLBCL → numerous ongoing clinical trials.
Promising immunotherapy approaches, such as chimeric antigen receptor (CAR) T cell therapy and therapeutic blockade of immune checkpoints, in particular cytotoxic T lymphocyte-associated protein 4 (CTLA4) and programmed cell death protein 1 pathway (PD-1/PD-L1), have boosted the development of new therapeutic regimens for patients with relapse/refractory DLBCL.

Immune blockade of the PD-1/PD-L1 interaction by monoclonal antibodies can restore the antitumor activity of cytotoxic T cells.

Early clinical trials using two anti-PD-1 antibodies (nivolumab and pembrolizumab), and three anti-PD-L1 antibodies (avelumab, durvalumab, and atezolizumab), have shown great promise.
CASE SUMMARY

- A 48 year old lady, nonsmoker, nonalcoholic, presented with neck nodes, axillary nodes, fever, and weight loss, was diagnosed to have Diffuse Large B Cell Lymphoma in December 2009, treated with 6 cycles of R-CHOP till May 2010. She was under regular follow up with the treating Doctor.

- **1st Relapse:** July 2012 → treated with R-DHAP; completed in January 2013.

- **2nd Relapse:** August 2014 → treated with R-ICE 4-cycles followed by Allogenic HSCT → June 2015 CMR on PET-CT.
3rd Relapse: December 2016: isolated axillary lymphadenopathy → confirmed DLBCL by HPR and IHC:
Patient was reluctant for any kind of chemotherapy
Was counselled about the new option: Nivolumab

Started Nivolumab with 3mg per kg every 2 weekly and after 4 cycles she had complete response and was confirmed with PET-CT.
PET CT SHOWING HYPERMETABOLIC LEFT AXILLARY LYMPH NODES
Patient tolerated immunotherapy very well without any side effects.
Now she is continuing the same dose and schedule, completed 12\textsuperscript{th} cycle last week, without any symptoms of the disease or any adverse reactions of the drug.
QUESTIONS

- How long we should continue?.
- Cost benefit?.
- Is there any role of MSI testing in this case?.

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