P1078 PATIENTS WITH HODGKIN LYMPHOMA DEVELOP ADEQUATE HUMORAL SEROLOGICAL RESPONSE TO VACCINATION WITH TWO DOSES OF BNT162B2 AND THEIR IGG ANTIBODY LEVELS MARKEDLY INCREASE AFTER A THIRD VACCINE DOSE

Topic: 17. Hodgkin lymphoma - Clinical

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Background: In patients (pts) with hematological malignancies, COVID-19 is considered to be associated with a high risk of severe morbidity and mortality. While anti-COVID-19 vaccination of such pts has become the standard of care, pts undergoing lymphodepleting therapy fail to generate protective serological response due to either the nature of their underlying disease or exposure to therapy.

Aims: This study aimed to assess serological response to vaccination with BNT162b2 (Pfizer) as well as COVID-19-related morbidity and mortality in Hodgkin lymphoma (HL) pts.

Methods: The above vaccine was available in Israel from January 2021 and all pts with hematological malignancies were recommended to undergo vaccination with 2 doses of this vaccine, injected 21 days apart. Six months later a 3rd dose was recommended and in another 3 months a 4th dose was available for pts at risk. Serology tests were performed at least 2 weeks after the 2nd vaccination. The SARS-CoV-2 IgG II Quant (Abbott©) assay was used to measure levels of IgG antibodies (Abs) against the SARS-CoV-2 spike protein. A result was considered positive if the IgG level was ≥150 AU/ml, which was defined as an adequate serological response.

Results: The current non-interventional single-center study evaluated the outcome of 55 HL pts (median age 46 years, 53% females); 51% of pts had advanced HL. Study participants received 1-9 lines of therapy (median 1 line). Six pts had COVID-19 prior to vaccination, 49 were vaccinated: 9 with 2 doses, 36 with 3 doses and 4 with 4 doses of BNT162b2. Following initial 2 vaccine doses and after a 3rd dose Ab levels >150 AU/ml were developed in 85% and 89.5% of pts, respectively. At a median of 95 days post-2nd vaccination, Ab levels were 2024 (1-29400) and 4 (0-7539) in 48 patients with no background disease versus 7 pts treated with lymphodepleting drugs or having a background disease, respectively. During the follow-up, 3 vaccinated pts were diagnosed with COVID-19 when the Delta variant was prevalent and 9 - during the Omicron wave. Notably, similar Ab levels were observed in those infected with Omicron and in non-infected pts, reflecting the genetic drift of this variant. A further analysis was performed to compare findings in a subgroup of 7 pts who had an additional background disease along with HL, such as chronic lymphocytic leukemia, s/p kidney transplantation, solid tumor, or those who were heavily pretreated, including therapy with bendamustine, versus the values observed in the rest 48 pts. The median age in the former subgroup was 58 (31-80) years, which was significantly older than in the remaining pts [median 45 (18-78) years] and median Ab levels were 4 (0-7539) AU/ml and 2024 (1-2940) AU/ml, respectively. Notably, after the 3rd vaccination, the median Ab level in both groups was 7000 AU/ml.

Summary/Conclusion: The results of the current study show that at least 85% of HL pts develop a high titer of anti-spike antibodies after...
vaccination with 2 BNT162b2 doses. These titers substantially increased post the 3rd vaccine dose. Only a minority of HL pts who had additional background diseases or were heavily pretreated, failed to develop an adequate serological response; however, some of them had high Ab titers post-3rd and 4th vaccinations. In this study, morbidity and mortality rates of HL pts infected with COVID-19 were lower than those reported in pts with other lymphoma types.