Scottish Haematology Society Report – Medical Student Bursary

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25th August 2023

Dear Dr Nicholson and Dr Manson,

I am writing to provide an update on the completion of my medical elective, for which I received the Medical Student Bursary offered by the Scottish Haematology Society. I am immensely grateful for your support for what has been a great opportunity.

My time at the Monteprincipe Hospital in Madrid has been a great learning experience, which has allowed me to develop an understanding of diagnosing, investigating, and managing various malignant haematological conditions. Spending most of the time with paediatric oncologists both in outpatient clinics and in the wards, I have had the opportunity to see a wide range of paediatric cases, while improving on my history taking and examination skills. I particularly enjoyed having the opportunity to rotate across different departments, which allowed me to see surgeries, PET scans and radiotherapy sessions. Getting to know the diverse multidisciplinary team, I have developed an appreciation for the different ways in which each member contributes to the holistic management of the patient.

One aspect that I have found really rewarding is that most patients with malignant haematological conditions such as ALL and Hodgkin's Lymphoma are able to be cured with the correct treatment. However, I have also developed an appreciation for the fact that there is still a lot of work to be done regarding the high toxicity associated with common chemotherapy regimens. For example, during my placement, one patient with Hodgkin's Lymphoma developed a life-threatening case of hepatic sinusoidal obstruction syndrome, probably secondary to treatment with dacarbazine in combination with a pre-existing genetic susceptibility. This has illustrated the need for a greater number of targeted therapies, which have the potential of achieving high efficacy with an improved safety profile. It has been fascinating to learn about the development of such therapies such as brentuximab in the case of Hodgkin's, and how these are revolutionising management in this field.

Finally, I wanted to share another interesting case of a patient with refractory stage IV-B Hodgkin's Lymphoma, in which we identified an interesting potentially pathogenic genetic mutation (*Figure 1*). This was a case of a 11-year-old girl who was diagnosed in ICU having a large mediastinal mass that was causing severe pericardial and pleural effusions leading to haemodynamic instability. She was initially treated with 2 cycles of ABVD but only achieved a partial response. She was subsequently switched to receive 4 cycles of BRESHAP. Unfortunately, during this time she experienced progression of her disease as shown by PET-CT. As a third line of treatment, she received Pembrolizumab + GVD followed by autologous peripheral blood stem cell transplantation (APBSCT). After this treatment, she achieved a complete metabolic remission and is now currently receiving maintenance pembrolizumab as well as radiotherapy to the mediastinal mass. During my time on placement, we received the results of her genetic study, which I was able to investigate. She was found to have a mutation in the TACI protein, a member of the TNF receptor superfamily which has been implicated in the survival and proliferation of Hodgkin cells[1]. We thought that this was an interesting finding that could potentially explain her unusually aggressive disease as well as the lack of response to

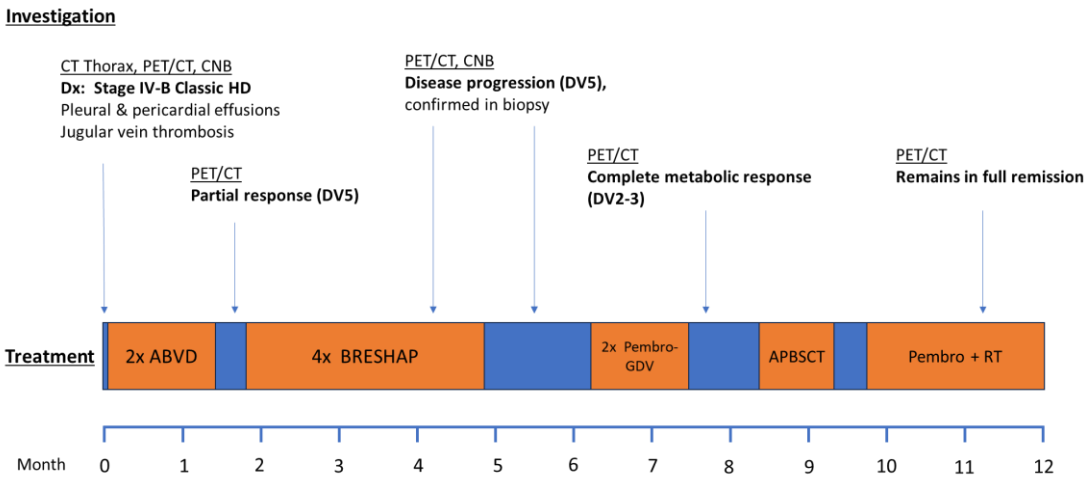
highly effective therapies. I have taken on writing this as a case report and hopefully publish it in case this can help other patients with similar genetic alterations.

Once again, I would like to express my sincerest appreciation for the opportunity and support provided by the Scottish Haematology Society and hope that we can continue working together in the future.

Best wishes,

Juan Larraz

***Figure 1*: Outline of investigations and management received from diagnosis of a patient with Stage IV-B Hodgkin's Disease**



References

1). Chiu A *et al.* Hodgkin lymphoma cells express TACI and BCMA receptors and generate survival and proliferation signals in response to BAFF and APRIL. *Blood*. 2007. doi: 10.1182/blood-2006-04-015958.