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Immune-Related Toxicity: Not always the Culprit

Ana Cardeña Gutiérrez[1*], Daniel Riado Minguez[2], Mónica Esteban García[1], Elena García García[3] and Xabier Mielgo Rubio[1]

[1]Medical Oncology Department. H. Universitario Fundación Alcorcón, Madrid, Spain

[2]Gastroenterology Department. H. Universitario Fundación Alcorcón, Madrid, Spain

[3]Pathology Department. H. Universitario Fundación Alcorcón, Madrid, Spain

***Corresponding author**

Ana Cardeña Gutiérrez, Medical Oncology Department. H. Universitario Fundación Alcorcón, Madrid, Spain. Tel: +34 916219490; E-Mail: a.cardenna@gmail.com

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A 64-year-old man without any previous illness was diagnosed in May 2020 from stage IV lung adenocarcinoma. No driver mutation was found but with PDL-1>50% we could start first line Pembrolizumab 200 mg/3weekly, with great tolerance and partial response after three cycles. He only presented grade 1 emesis on day +1 after each cycle, but we did not relate it with immunotherapy.

He was admitted into the emergency room on September 2020 due to a three-day grade 3 emesis and rapidly progressive weight loss. Complementary studies showed grade 3 immune-related gastritis, with great response to corticosteroids within 2 days of treatment. He received metilprednisolone 1mg/kg/day for one month, and then, we started corticosteroid tapering. However, we could not lower the dose from prednisone 30 mg/day because grade 2 emesis and grade 2 diarrhea appeared. We considered starting Infliximab 5 mg/kg for corticosteroid refractory immune-related toxicity(irAEs) but we needed an endoscopic study first, as ESMO guidelines recommend [1]. Pre-antiTNF screening with viral serologies an IGRA was negative.

The patient missed the appointment because of debilitating dorsal pain that led him to the emergency room. A CT-scan revealed pleural progressive disease invading his chest wall, so we increased the opioids dose to 100 mg iv daily until palliative radiotherapy could be initiated. Meanwhile, as emesis reappeared, we thought the rapid increase of morphine may have been the trigger. Nevertheless, despite having controlled chest pain and having decreased opioid, grade 2 emesis and diarrhea persisted, and he did not respond to increasing corticosteroids. We programmed an endoscopic study during admission and biopsies were taken. What is the most likely diagnosis?

We programmed an endoscopic study during admission and it showed worsening ulcerative gastric disease and also, newly atrophic duodenal mucosal. Multiple biopsies were taken. Stool samples, a colonoscopy and MR-enterography did not show any pathological findings. We were about to initiate Infliximab when the biopsy showed these findings (Figure 1), highly suggestive of giardia duodenalis infection. After that, we changed infliximab for metronidazole 500 mg/daily and the patient remained asymptomatic within 2 days, which allowed us to continue corticosteroid tapering and to start second line treatment with Carboplatin and Pemetrexed.

Despite this, the patient had to be admitted due to grade 4 cytopenias and respiratory sepsis after the first cycle, with slow response to antibiotics. We also witnessed rapidly progressive disease and because of severe deterioration of performance status, the patient had to be transferred to a palliative care clinic.

This case taught us that immune related toxicities are not always the culprit and that histological confirmation is desirable. Also, we can see that unfortunately, in our daily practice some severe toxicities do not lead to long-term response in contrast to data from some retrospective studies [2]. One explanation could be that high dose corticosteroids may be guilty and also, may have led to aggravate gastric ulcerative disease in our patient [3]. We have to deepen the study of molecular bases of the link between immune-related toxicity and tumor response. Also, improving our management of severe toxicities is mandatory, trying to avoid the immunosuppression linked to prolonged use of corticosteroids, that can lead to life threatening infectious disease, as happened in this case.

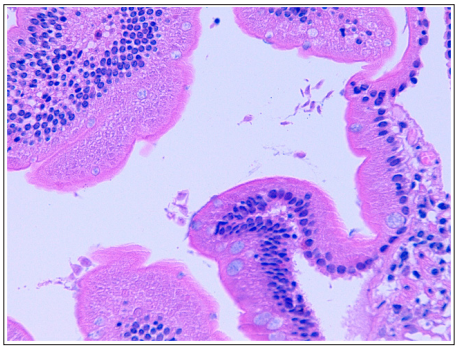

Figure 1: Haematoxylin and eosin stained section showing Giardia lamblia in the duodenal mucosa (40x)

Conflicts of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Contributions of Each Autor

Ana Cardeña was the driving force of this project, the main author of the manuscript and the oncologist that treated the patient. Daniel Riado colaborated in the writing of the manuscript and also, in the adecuate diagnosis of the patient, and also, reviewing the bibliography that was available and related to this case. Elena García was the coordinator of the project and the pathologist that analyzed the patients samples.

Refferences

1. Haanen JBAG, Carbonnel F, Robert C, Kerr KM, Peters S, et al. (2017) Management of toxicities from immunotherapy: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Annals of oncology 28: 119-142.
2. Haratani K, Hayashi H, Chiba Y, Kudo K, Yonesaka K, et al. (2018) Association of Immune-Related Adverse Events With Nivolumab Efficacy in Non-Small-Cell Lung Cancer. JAMA Oncol 4: 374-378.
3. Pan EY, Merl MY, Lin K (2020) the impact of corticosteroid use during anti-PD1 treatment. J Oncol Pharm Pract. 26: 814-822.