PEMBROLIZUMAB AND INMUNE MEDIATED NEPHRITIS: A CASE REPORT

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Background

- Pembrolizumab is a selective humanized IgG4 monoclonal antibody known as a programmed cell death 1 (PD-1) immune checkpoint inhibitor. It is the First PD-1 Inhibitor approved for Unresectable or Metastatic Melanoma. With the arrival of this new mechanism of action also arrived immune-mediated adverse reactions.

Conclusions

- Health professionals must be vigilant in identifying drug related adverse reactions, particularly those related to drugs on the European list of medicinal products under additional monitoring.
- Nephritis has been reported in patients receiving pembrolizumab, patients should be monitored for changes in renal function and other causes of renal dysfunction should be excluded.
- In our case, creatinine dramatically increased after the third cycle of treatment with pembrolizumab (onset of three months) and it has continuously decreased since pembrolizumab discontinuation, eventually reaching normal range.

Purpose

- To describe a immune mediated nephritis in a diagnosed nodular melanoma patient that was being treated with pembrolizumab as a secondline treatment.

Material and methods

Descriptive and retrospective clinical case
Data were obtained by review of the electronic medical records

Results

Man 78 years old
BRAF mutated
metastatic nodular melanoma

PREVIOUS TREATMENT
BRAF inhibitor and
MEK inhibitor
1st line treatment
Beginning: April 2015

IMAGING TESTS
show disease progression
Pembrolizumab was interrupted in September 2015

Pembrolizumab was well tolerated at the beginning (cycle 1 and 2)
Cycle 3
Creatinine started increasing until reaching 3.59 (grade 3)
Estimated Glomerular Filtration 17.57 mL/min/1.73m²

These laboratory abnormalities caused patient’s emergency admission
TREATMENT DISCONTINUATION

Lesion was operated in October 2015
Radiotherapy ➔ Nov 2015 - Feb 2016

Pembrolizumab (2nd line treatment) was initiated in March 2016

Pembrolizumab is on the European list of medicinal products under additional monitoring

Karch-Lasagna algorithm
Stablishes

A “POSSIBLE” relationship between nephritis and pembrolizumab based on temporal correlation between the start of the treatment and the nephritis appearance, as well as the treatment discontinuation and the nephritis improvement.

CLINICAL TRIALS
keynote 001, keynote 002 and keynote 003
Nephritis occurred in 0.4% of patients receiving pembrolizumab
Including nephritis Grade 2, 3 and 4
The median time to onset of nephritis was 5.1 months
(range: 12 days to 12.8 months)