Impact of anti-infectious and corticosteroids on immunotherapy: Nivolumab and pembrolizumab follow-up in a French study

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Background: Immunotherapy is a new paradigm with EMA approval in melanoma and lung cancer. However, B Routy and al has recently published a decrease of efficacy of immunotherapy via gut microbiome antibiotics influence and potential drug interactions between antibiotics/corticoids and immunotherapy associated with decrease of overall survival have been underlined too. The Observatory of Drugs, Medical Device and Therapeutic Innovations (OMEDIT) Bretagne/ Pays de la Loire (B-PL), in collaboration with French Regional Health Insurance System (FRHIS), wanted to carry out a study about the impact of these treatments on the efficacy of immunotherapy.

Methods: FRHIS (PL) has made an extract in its database for patients who initiated treatment with Nivolumab/Opdivo® and Pembrolizumab/Keytruda® between January 2016 and end of June 2017. Dispensing of antibiotics, corticoids and antifungals 60 days before initiation of immunotherapy and after the beginning of treatment (within 30 or 150 days after). The patient’s clinical data (age, sex; diagnosis, indication, grade III/IV side-effects, response rate, survival) would be crossed with the use or not of anti-infectious drug treatment in order to define the impact of taking these drugs on the treatment of immunotherapy.

Results: 798 patients were identified including 377 in 2016 and 421 in the first half of 2017: 148 with malignant melanoma and 650 with lung cancer. 763 were treated with nivolumab and 35 with pembrolizumab. Before the beginning of immunotherapy, 14% of these patients received an antibiotic, 17% a corticoid and 2% an antifungal. After the beginning of immunotherapy (within 30 days after), 8% received a corticoid, 6% an antibiotic and 2% an antifungal. Response to treatment, Progression Free Survival and Overall Survival (PFS and OS) in correlation with the use or not of these drugs for Bretagne and PL areas would be presented at the meeting.

Conclusions: The good use of immunotherapy was crucial to optimize the response rate and to increase OS. Use of anti-infectious and corticosteroids was usual in routine. Antibiotics were found to be prescribed in 20% of the patients receiving immunotherapy. Results about their impact in term of response, PFS and OS would be shown at the meeting.

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