

TAKING THE BRAKE OFF. IMMUNOTHERAPY INDUCED DYSFUNCTION WITH IMMUNE CHECKPOINT INHIBITORS

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Background: Targeting the immune checkpoints cytotoxic T-lymphocyte-associated protein 4 (CTLA-4) and programmed death 1 (PD-1) with inhibitory antibodies has demonstrated effective and durable antitumor activity in subgroups of patients with cancer. Thyroid-Related Adverse Events (TRAEs) have emerged as one of the most common immune-related adverse events of Immune checkpoint blockade therapy with a reported incidence range of 2%-15% depending upon the Immune checkpoint blockade used. The aim of this study is to describe the incidence of TRAEs retrospectively in patients who received Immune checkpoint blockade therapy.

Methods: A total of 285 patients were reviewed (178 male, 107 female; 16-94 years of age), of whom 218 had no baseline TRAEs, 61 had baseline TRAEs, and 6 had a history of thyroidectomy (excluded). At least one dose of ipilimumab and/or nivolumab or pembrolizumab was administered. Post-Immune checkpoint blockade therapy TRAEs were classified according to standard definitions of thyroid conditions when possible.

Results: A total of 35% (76/218) patients had new-onset TRAEs on ICI therapy. Of note, 70.5% (43/61) had baseline TRAEs that were exacerbated by Immune checkpoint blockade therapy. The median times to new-onset or exacerbated baseline TRAEs were 46 and 33 days, respectively. Of note, 64.5% (20/31) of patients on both ipilimumab and nivolumab had new-onset TRAEs, compared with 31.3% (15/48) on ipilimumab, 31.5% (28/89) on nivolumab, and 26% (13/50) on pembrolizumab.

Conclusion: The incidence of TRAEs with ICI therapy was higher than previously reported. Patients with baseline TRAEs and/or who were receiving ipilimumab and nivolumab combination therapy had a higher incidence of TRAEs than patients receiving single-agent Immune checkpoint blockade therapy. We recommend more frequent evaluation of thyroid function in the first 8 weeks, especially in patients with baseline TRAEs.

Biography

Yasar Ahmed is a doctor at University Hospital Waterford, Ireland. His interest includes Cancer Biomarkers, Clinical Immunology, Anti-Cancer Drugs, Biochemistry Of Cancer and Immunogenomics. He has published more than 20 papers in reputed journals.

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