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Immune-related neurologic toxicities among solid tumor patients treated with immune checkpoint inhibitors: a systematic review.

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Abstract

Immune-related neurologic toxicities are uncommon but serious adverse events that may be associated with the use of immune checkpoint inhibitors. The objective of this review is to assess the incidence and risk of neurologic toxicities which are potentially immune-related and occur with immune checkpoint treatment of solid tumors. Areas covered: PubMed database has been searched till January 2017. Clinical trials, case series and case reports reporting the occurrence of immune-related neurologic toxicities in solid tumor patients treated with immune checkpoint inhibitors were included. Eighteen trials with 4469 participants were included. The most common neurologic toxicities reported with these agents included sensory and motor peripheral neuropathies. Moreover, 17 case reports describing immune-related neurologic events occurring with 22 patients were included. Expert commentary: Immune-related neurological toxicities occur uncommonly in cancer patients treated immune checkpoint inhibitors. Further studies are needed to better describe the course of these events (i.e. time to onset, time to resolution and responsiveness to different immunosuppressives).

KEYWORDS: Pembrolizumab; atezolizumab; neurologic events; nivolumab

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