ABSTRACT

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Neurotoxicity and safety of the rechallenge of immune checkpoint inhibitors: a growing issue in neuro-oncology practice.

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Neurological, immune-related adverse events (n-irAE) due to immune checkpoint inhibitors (ICI) represent a growing clinical problem in neuro-oncology practice. Although rare, the frequency of n-irAEs will increase as ICI use becomes more common. Central and peripheral nervous systems may be involved, and multiple n-irAEs like myositis, myasthenia gravis, and myocarditis can arise in the same patient. Prompt recognition, initial ICI discontinuation, and treatment with immunosuppressive therapy comprise key aspects of managing these potentially fatal neurological complications. Severe and/or treatment-refractory n-irAEs may occur and require individualized care. In the same vein, a possible reintroduction of ICI after a n-irAE represents an additional challenge in clinical practice. An approach by experienced neurologists involved in highly subspecialized, multidisciplinary care teams is, therefore, of major importance in managing these cases. The present study updates current knowledge regarding presentation forms, diagnostic workflows, outcomes, and general management of n-irAEs. With the aim to guide neurologists in decision-making processes during such scenarios, the study further reviews available data on ICI reintroduction safety in patients with prior n-irAEs.

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