Editorial
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Editors' Pick in September 2023

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Among the 14 papers published in the September issue of *Journal of Korean Neurosurgical Society* (*JKNS*) 2023, the following two papers, which deserve attention from readers, are selected by the Editorial Board.

Updated trans-ethnic meta-analysis of associations between inflammation-related genes and intracranial aneurysm[3]

An intracranial aneurysm can result in life-threatening consequences when it ruptures, causing subarachnoid hemorrhage. Consequently, it is one of the hot topics of research, particularly in identifying high-risk groups predisposed to aneurysm formation and rupture. It is known that inflammation plays a crucial role in various stages of aneurysm formation, such as endothelial dysfunction and vascular smooth muscle cell abnormalities[1]. It is also known that an elevated expression of tumor necrosis factor (TNF)-α in human intracranial aneurysm suggests its role in inflammation-mediated promotion of aneurysm[4]. These findings present the possibility of characterizing high-risk groups by assessing the impact of inflammation-related genes on the formation or rupture of intracranial aneurysm.

A multi-ethnic meta-analysis was conducted to evaluate the association between inflammation-related loci and aneurysm susceptibility. This analysis showed that rs1800796 (interleukin [IL]-6) gene was closely associated with aneurysm, and offered a protective effect against aneurysm formation in the East-Asian population. In addition, three inflammation-related variants (rs16944 [IL-1β], rs2195940 [IL-12B] and rs1800629 [TNF-α] potentially have a genetic association with aneurysm formation in European and Asian populations. Despite revealing moderate heterogeneity between intra-population and inter-population, this comprehensive meta-analysis provides insights into the factors involved in aneurysm formation and rupture.

Effect of bevacizumab treatment in cerebral radiation necrosis: Investigation of response predictors in a single-center experience[5]

Cerebral radiation necrosis (RN) is a feared adverse reaction associated with radiation therapies. It is caused by radiation-induced endothelial cell damage and subsequent release of vascular endothelial growth factor (VEGF), which results in angiogenesis, increased vascular permeability and brain edema. It is well known that corticosteroids, which counteract vascular endothelial damage and modulate inflammatory changes and edema, lead to rapid symptomatic improvement. However, some patients do not respond to corticosteroid.

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Considering the overexpression of VEGF in RN, preventing it reaching its capillary targets may be a logical treatment strategy. Bevacizumab, a humanized monoclonal antibody against VEGF, might be an effective treatment option for RN[2].

A retrospective study showed that bevacizumab was fairly effective in reducing edema in RN. It was proposed that bevacizumab was more effective in patients without diffusion restriction in magnetic resonance image and those with non-glial tumors. This study is significant because it investigated which factors affect the effectiveness of bevacizumab. Further study is needed to validate these findings and understand the mechanism of these influential factors.

AUTHOR'S DECLARATION

Conflicts of interest

No other potential conflict of interest relevant to this article was reported.

Author contributions

Conceptualization : HJY; Data curation : HJY; Formal analysis : HJY; Methodology : HJY; Project administration : HJY; Visualization : HJY; Writing - original draft : HJY; Writing - review & editing : HJY

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