The relationship between NKG2D-ligand and anesthesia before and after digital subtraction angiography

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Aim: This study aims to provide the influence of anesthesia on the expression of natural killer cells and major histo-compatibility complex (MHC) molecules patients who had cerebral digital subtraction angiography (DSA) for either the diagnosis or treatment of intracranial vascular pathologies.

Material & Methods: Forty-one male patients who admitted for cerebral DSA were included in this study. Patients were divided into two groups: Group I (n=7) included patients who did not receive anesthesia and group II (n=34) received anesthesia. For the molecules, a venous blood samples from every patient was collected before and after cerebral DSA.

Results: In the group I, NK cells, NKG2D, MICA/MICB, CD3 and CD8 cytokines were increased significantly after the DSA but CD16+56+ and MHC-class I showed no statistical significant difference. In the group, NK cells, CD16+56+ and MICA/MICB levels did not show significant difference. On the other hand NKG2D, MHC-class I, CD8+ and CD3+ levels increased significantly after the DSA. Comparing the group I and II after the DSA showed no significant difference regarding CD16+56+ and NKG2D. NK (CD56+), MICA/MICB decreased and MHC-class I, CD8+, and CD3+ levels increased significantly in the group II.

Conclusion: Anesthesia combined with surgical stress DSA causes some alterations in the immune status of the patients. More data will lead us to give appropriate agents to the patients in order to strengthen the immune status during the preoperative period for decreasing the morbidity and/or mortality rate.

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