

Interleukin 23 and **interleukin 17** are pro-inflammatory **cytokines**. IL-23 is secreted by activated **macrophages** and **dendritic cells**, while IL-17 by Th17 cells. Serum IL-23 and IL-17 are known to be elevated in numerous inflammatory diseases including neurodegenerative diseases. The role of serum IL-23 and IL-17 in **aneurysmal subarachnoid hemorrhage** (aSAH) has been investigated.

In a study, 80 patients with aSAH (Hunt and Hess grade I-V) were prospectively recruited. Chaudhry et al. enrolled 24 control patients with **lumbar spinal stenosis**. Peripheral venous blood was withdrawn from controls and from aSAH patients at day 1 and day 7, allowed to clot and centrifuged to obtain serum. Enzyme linked immunoassay kits were employed to quantify the serum levels of IL-23 and IL-17 by applying 50µL of serum samples. Post hemorrhagic complications and clinical outcome were documented prospectively from patient's hospital record.

Serum IL-23 and IL-17 levels were significantly elevated in aSAH patients at day 1 and day 7 (n=80) as compared to control patients (n=24). Further analysis after dichotomy of patients who suffered from post hemorrhagic complications including cerebral **vasospasm**, chronic hydrocephalus, seizures, cerebral ischemia, delayed neurological deficits showed differential correlations with different post hemorrhagic complications

Serum IL-23 and IL-17 levels did not correlate with clinical outcome.

Serum IL-23 and IL-17 levels were elevated in patients with aSAH showing upregulation of IL-23/IL-17 inflammatory axis after aSAH. Serum IL-23 and IL-17 showed differential correlations with post hemorrhagic complications and no correlation with clinical outcome ¹⁾.

¹⁾

Chaudhry SR, Güresir E, Vatter H, Kufe TM, Dietrich D, Lamprecht A, Muhammad S. Aneurysmal subarachnoid hemorrhage lead to systemic upregulation of IL-23/IL-17 inflammatory axis. Cytokine. 2017 Jun 10;97:96-103. doi: 10.1016/j.cyto.2017.05.025. [Epub ahead of print] PubMed PMID: 28609751.

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