Adrenomedullin

Adrenomedullin (ADM or AM) is a vasodilator peptide hormone of uncertain significance in human health and disease. It was initially isolated in 1993 from a pheochromocytoma.

Adrenomedullin (ADM) has been reported to induce glioblastoma cell growth.

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miR-1297 sensitizes glioma cells to TMZ treatment by targeting ADM. The Bax/Bcl-2, Akt, and Erk1/2 signaling pathways, as well as mitochondrial functions might be involved [1)]

Adrenomedullin (ADM) has been identified as a promising biomarker of mortality and outcome in sepsis, heart failure and after major surgery. A recently developed assay specific for bioactive adrenomedullin (bio-ADM) has not yet been assessed in aneurysmal subarachnoid hemorrhage (aSAH). The objective of a prospective trial was to assess the time course of bio-ADM after aSAH in relation to the development of delayed cerebral ischemia (DCI) and its association with clinical outcome.

Bio-ADM levels in plasma and cerebrospinal fluid (CSF) were measured during five predefined epochs, for up to 21 days in 30 aSAH patients: early, (day 0 to day 3); acute, (day 4 to day 8); early critical, (day 9 to day 12); late critical, (day 13 to day 15), and late (day 16 to day 21). DCI was diagnosed clinically or based on multimodal monitoring and imaging, and the occurrence of DCI-related cerebral infarction, and outcome after 12 months (extended Glasgow outcome scale), was noted.

Higher median bio-ADM levels in plasma during the acute phase were predictive of long-term unfavorable outcome (AUC = 0.97; 95% CI 0.91 to 1.00; $p < 0.001$). Early critical bio-ADM levels during DCI were lower in CSF and confirmed DCI occurrence (AUC = 0.80; 95% CI 0.59 to 1.00; $p = 0.044$).

The dynamics of bio-ADM levels in CSF present a fairly different course compared to plasma with observed higher bio-ADM concentrations in patients spared from DCI and/or developing favorable outcome [2)].

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