Homogeneous time-resolved fluoroimmunoassay for the measurement of midregional proadrenomedullin in plasma on the fully automated system B.R.A.H.M.S KRYPTOR (Caruhel P, Mazier C, Kunde J, Morgenthaler NG, Darbouret B.). As these peptides are generated in a stoichiometric ratio from the same precursor, their plasma levels are correlated to a certain extent.

Only in a few studies plasma ADM has been measured in patients with systemic inflammation, sepsis, severe sepsis or septic shock, and levels have been correlated with hemodynamic parameters:

In a study by Hirata *et al.* plasma ADM in septic patients was found to be correlated with heart rate, right arterial pressure, but not with mean arterial pressure (MAP) (Hirata Y, Mitaka C, Sato K, Nagura T, Tsunoda Y, Amaha K, Marumo F: Increased circulating adrenomedullin, a novel vasodilatory peptide, in sepsis. The Journal of clinical endocrinology and metabolism 1996, 81(4):1449-1453).

Nishio *et al.* reported that increased plasma concentrations of ADM were correlated with relaxation of vascular tone in patients with septic shock (correlation with cardiac index, stroke volume index, heart rate, decrease in diastolic blood pressure, systemic vascular resistance index and pulmonary vascular resistance index), however there was no significant correlation with mean blood pressure [19] .

In healthy subjects under exercise a significant negative correlation of plasma ADM and MAP was found [20].

Summary

In an aspect, there is provided an in vitro method for identifying a subject in need of fluid resuscitation or administration of a vasopressor comprising the following steps:

- Determining the level of proADM (SEQ ID No. 1) and/or fragments thereof having at least 6 amino acids in a bodily fluid of said subject

- Correlating said level with the need of said subject for fluid resuscitation or administration of a vasopressor wherein said subject is identified as having such a

need if the level of proADM (SEQ ID No. 1) and/or fragments thereof having at least 6 amino acids in the bodily fluid of said subject is above a threshold.

In another aspect, there is provided a vasopressor for use in treatment of a subject in need of administration of a vasopressor wherein said subject is identified according to a method as defined herein.

Detailed Description

Nothing is known about the association of circulating ADM or related peptide levels as pro-ADM or fragments thereof and the requirements for fluid resuscitation and vasopressors in patients developing shock. This is an unmet medical need as vasopressors are usually given very late when the condition of the patient is very serious. It is an unmet medical need to identify those patients in need of fluid resuscitation and vasopressors before the condition of the patient is very serious. It is an unmet medical need to predict the requirement for fluid resuscitation and vasopressor therapy earlier than by blood pressure measurement applying the cut-off value of 65 mm Hg, as recommended in the guidelines [21]. If blood pressure fells, this leads to diminished oxygen supply, organ dysfunction and death. It is thus an unmet need to early identify patients who are at risk to develop a blood pressure decline. If such patients