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The recruitment of microcirculatory-mitochondrial of critical obstetric situations in the complex multi-organ support therapy reduces pCO_2 (AV gap) and the development of the syndrome of acute multi-organ dysfunction

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A retrospective analysis of the 35-year absence of maternal mortality in critical obstetrics, in different countries, was due to the timely decentralization of macro-circulation, detoxification and analgesia. Macro-circulation was decentralized once the systemic perfusion pressure has been established; which is the difference between the mean blood pressure and the pressure of the capillary resistance, and what contribute to by decreasing the tissue hypoxia marker pCO_2 (pCO_2 AV gap >6 mm Hg) due to micro-circulatory-mitochondrial recruitment, through improved microcirculation at the level of the capillary-cell metabolic area: metabolic capillary cells mitochondria; with ameliorate of the venous return compliance and reduction (pCO_2 AV gap <6 mm Hg), and respectively, diminishes of the microcirculatory-mitochondrial distress syndrome (MMDs), and stopping expansion syndrome of acute multi-organ dysfunction. In cases of development of respiratory-pulmonary pCO_2 (ARDs), confirmed PaO_2/FiO_2 300 to Acute Respiratory Distress Syndrome (Berlin definition, 2012), thus also aggravates the MMDs (pCO_2 AV gap >6 mmHg), mitochondrial collapse and the recruitment of the microcirculatory-mitochondrial is supplemented with multi-organ support therapy (MOST), including detoxification: alveolar recruitment through respiratory support in specific ventilation modes, predominantly APRV, with permissive hypercapnia at a normal pH; MOST-extracorporeal with technical support. Extracorporeal life support organization-ELSO; modelling of extra-vascular pulmonary fluid index EVLWI; Th4-Th5 thoracic epidural block; active detoxification methods. The absence of decreasing of the pCO_2 tissue hypoxia marker at the pCO_2 AV gap 5.0 mm Hg after microcirculatory- mitochondrial recruitment, rejects the necrosis/apoptosis, hypo- (an) ergic cell and proves the mitochondrial eu-energetic metabolic remodelling with the elimination of the hypo-(an) ergic mitochondria performed by liposomal clearance (mitophagy), thus demonstrating eu-ergic mitochondria with the normalization of mitochondrial uniporter-Ca++ and mitochondrial permeability pore transition, which productively inactivate the toxic forms of oxygen and nitrogen.

Biography

Ilie Vasiliev, MD, is an Academy Professor of Medicine. The First Senior Vice-President the World Academy of Medical Sciences The Chairman of the General Council of the World Academy of Medical Sciences (World Council). The Chairman of the "WAMS Moldovan National Committee" Senior Executive Board Member of the World Academy of Medical Sciences Senior Fellow of the Academy of the World Academy of Medical Sciences Full Membership of the "Academy Faculty" Executive Board Membership of the WAMS' International Medical Research Council (IMREC).

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