## Paul Marik as a pioneer

Dr. Paul E. Marik is a professor of medicine and is chief of the Department of Lung and Critical Care Medicine at Eastern Virginia Medical School. He is known for the vitamin C sepsis cocktail or HAT therapy (short for Hydrocortisone, Ascorbic Acid and Thiamine). For a nice overview, see the article in Ortho, from 2017.

## The publicity

That he sought publicity with his approach was not appreciated by some colleagues. But 3 things were ignored and that is a shame.

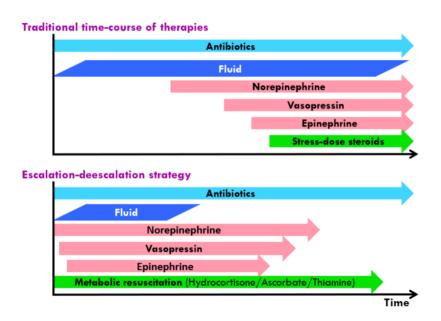
His motivation: Based on the very positive, life-saving effects of his treatment for a disease that usually kills many, he has considered it ethically correct to publish the results quickly, although supported by carefully designed research and building on an enormous amount of literature and research already done on vitamin C. The publicity it generated was an eyesore for some. But it is unfair to pretend that he has sought publicity to "outsmart others" or out of self-interest. Or to suggest that he just "messed around" and damaged science. Anyone who knows him even slightly is convinced of his passion to serve patients with his knowledge. And that he also has many scientific publications to his name. He made a very brave choice at the time, which cost him a lot. And he made that choice consciously, accepting the fact that it would cause unrest in "the world of science". Why? Because he no longer wanted to withhold the "benefits" of vitamin C from patients, especially given the big difference his therapy made; not only in terms of faster recovery, but also as a "life-saver". These benefits are great and have been and are repeated to this day by many colleagues in other hospitals around the world.

His contribution to "evidence-based medicine": Marik is not only an IC doctor and head of the Pulmonary and Critical Care Medicine department in his hospital, but also a graduated pharmacologist. His knowledge of the behavior of medication and micronutrients in the human body and the complex biochemical processes involved is extensive. He has written a wonderful rationale about the effect of vitamin C and HAT therapy. In addition, he has extensively described the before and after studies that gave rise to disclosure and answered many detailed questions about it. He has also always indicated that he is in favor of further scientific research. But Evidence Based Medicin is more than just scientific evidence; the other 2 pillars consist of "clinical expertise" and "patient values and preferences". Paul Marik's "opponents" pass the last 2 very easily. And that is worrying... because the results in practice are tangible and they are reality. The reduction in mortality or the number of days that vasopressors are needed is recorded in graphs from hospitals and in the reported experiences of numerous doctors (as well as from a number of large trials) and is "reproducible", as practice shows. That would at least be a reason for curious and open consultation or constructive cooperation with Paul Marik. And the scientific research so far (of which 2 RCTs were clearly positive in favor of vitamin C and the HAT therapy) also provides good substantiation for this. In fact, when you look more closely at the other studies, vitamin C and the HAT therapy do appear to make an important difference, but the 'primary outcome' is sometimes so general that the study gives a distorted picture, while in subgroup analysis many positive findings are described. Unfortunately, these are not reflected in the general conclusion.

In addition, it is impressive to see how Paul Marik, together with many renowned colleagues from acute care (united in the FLCCC), regarding the treatment of COVID-19 (see the MATH + therapy), makes practice and scientific substantiation accessible, transparent and immediately applicable, for every hospital in the world. And not because he has a patent on these medicins.....he hasn't.

Furthermore, building on and drawing on previous scientific publications, Paul Marik has shown great insight and even greater foresight when it comes to the right approach to sepsis, see also the image below from a publication in Critical Care Medicine (2018) on the paradigm that is shifting in the approach to this clinical picture. Meanwhile, the early administration of vasopressors is also gaining support among his colleagues, as was also shown at the International Sepsis Symposium on 27-11-2020. And he also had the right insights with COVID-19, supported by his extensive clinical experience and previous publications. For example, from the start of the Corona pandemic, he emphasized, based on the first experiences with the treatment of patients, "COVID-19 is a steroid responsive disease" and that has now also been confirmed in large studies.

## The changing paradigm of Sepsis: Early diagnosis, Early antibiotics, Early pressors and Early adjuvant treatment



Marik & Fargas, Crit Care Med 2018;46:1690

Critical Care Medicine, The Changing Paradigm of Sepsis: Early Diagnosis, Early Antibiotics, Early Pressors, and Early Adjuvant Treatment\* Marik, Paul E. MD, FCCM; Farkas, Joshua D. MDAuthor Information Critical Care Medicine: October 2018 – Volume 46 – Issue 10 – p 1690-1692

## His contribution to making visible a growing gap that requires bridging

In pursuit of the "gold standard" in the world of science at all costs, the patient perspective is sometimes completely snowed under. There is growing a gap in some cases, such as with vitamin C, between the science perspective and the patient perspective. As obtaining the

'perfect evidence' is elevated to the only right standard, the direct patient interest can sometimes be jeopardized, with accelerated application of a promising agent not being given a chance, despite its safety. Are patient organizations asked to participate in decisions about whether to "already" or "not yet" use therapies? Are they asked what is important to them? Yet this is important because ethical considerations must be taken into account in the case of "limited evidence" and amid special circumstances including the fatality of a disease and its major impact on people's lives. In that situation 'limited evidence' can be judged as 'sufficient'. And the 'first stakeholders' should be given the chance to have a say in this matter. This does not in any way preclude further research. Paul Marik shows us that it is necessary to bridge this gap. And that starts with conversation.

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