ECRONICON OPEN ACCESS

EC EMERGENCY MEDICINE AND CRITICAL CARE

Opinion

Preventing Renal Failure in the Critically Ill Patient: Identifying the Problems and Finding the Solutions

Ahmed N Ghanem*

Consultant Urologist Surgeon, Department of Urology, Mansoura University, Mansoura, Egypt

***Corresponding Author:** Ahmed N Ghanem, Consultant Urologist Surgeon, Department of Urology, Mansoura University, Mansoura, Egypt. **E-mail:** anmghanem@googlemail.com

Received: April 28, 2019; **Published:** May 20, 2019

The magic bullet is "back to basics" of physics and physiology and 'to the future' on the capillary hydrodynamics as a 'porous orifice (G) tube'.

The excellent editorial by Dr Michael J O'Leary and Professor David J Bihari faithfully summarized the evidence on renal failure in the critically ill patients [1]. Acute renal failure (ARF) is part of the multiple vital organ dysfunction/ failure (MVOD/F) that commonly affects critically ill patients after major trauma and surgery. It has high morbidity with mortality of > 50% at the best intensive care units. It is clear from the editorial, and responses, that the problem has endless clinical debates with complex ramifications. The controlled prospective trials, big and small, add little but fuelling the fire of its debates. It was surprising that the subtitle stated "no magic bullets" but the end sentence fired one, "back to basics: optimise volume and defend pressures".

Yes, indeed, "back to basics", of physics and physiology and 'back to the future' on capillary hydrodynamics as a 'porous orifice (G) tube' [2], may be the only magic bullet to resolve the gigantic puzzle of MVOD/F syndrome. In agreement with the authors the key clinical issue is to "optimise volume and defend pressures" [1], but the whole medical world deserves an explanation how this might be done and what is its scientific basis? The future has already started. The observations, analogy, logic, vision, method, approach, results, conclusions and solutions are all there [2-9]. What is it, then, the real problem that prevents or hinders resolving the puzzle of MVOD/F syndrome? Unfortunately, it is neither scientific nor medical.

Repeating medical arguments, or even referencing it, are pointless on this occasion, as it all is available on MEDLINE, Google, open access journals and a book [9]. It might be more useful here to discuss the methods and approach used for "problem hunting and solution chasing". This article aims only at pointing out agreement and disagreement with, and where it parts from, the received concepts.

Every problem solving, medical or else, is a tree that has a trunk with roots, branches and fruits. Identifying the "problem trunk" and the "need" for a solution are based on (observations). The problem roots and branches are also identified (via specifically directed literature search and reading that aim at understanding). Analysing evidence (to identify previous contribution while segregating facts from fallacies) and hunting solutions will conjure up method and approach (via hard thinking that detects analogy, makes discoveries and conjures up solutions). Parallel experimental work to prove and verify a discovery may occur (reproducibility of data and statistics apply later).

Some steps may go in parallel, but the order remains correct. The process must produce correct solutions (fruits) that are both reproducible by the author and other researchers and beneficial to humanity (if it is beautiful it is bound to be right). Letting peers know about it (private and peer reviewed journals correspondence). Testing the hypothesis is the final part in the sequence of events (ethical medical pilot case studies or prospective controlled trials with appropriate statistics), as should publication of final results and conclusions. Peer appraisal and criticism of the work may highlight areas of weakness and strength. Reproducibility and verification by other researches give the provisional verdict while history gives the final one.

The same scientific process may be applied to the problem faced here: delayed recognition of the only feasible solution to the puzzle of MVOD/F syndrome. Analysis demonstrates that if it is simple unawareness, this message, articles [2-8] and a book [9] should resolve it. However, this is doubtful as repeated previous correspondence and article [3] were invariably ignored or patronized. If it is more explanation, data and acceptable results, then one needs education on how to get timely through the "firewall" of peer-reviewed journals with high impact factor?

It was miracles that these articles [2-8] got through. Thanks to the editors who believed in the difference between, and need for both, "talented amateur" and "competent professional" types of research. While the latter provides most useful incremental knowledge, the first may produce a quantum leap scientific advance. The movie, Amadeus, made an excellent statement on the two issues in music creativity. It also outlined the personality of the genius Mozart who exercised peculiarities that Salieris may consider acts of difficulty or disrespect, but I doubt if Mozart had ever meant it, as it is certainly untrue in science and medicine.

If it is only a problem of "science" that did not follow the "religion" that worships the belief of "no medical science is acceptable without prospective trials and statistics", there is time for "understanding of a new discovery" and another for providing the valid proof of scientific ethical "evidence-based medicine". It was observations, not controlled trials and statistics, that corrected basic errors on clinical haemodynamics data, fluid therapy concepts, a law in physiology and also made physics discovery [2,7-9]. The procedure has proved effective in other medical problems. Out of necessity, different method and approach to identify and resolve a problem may be based on a new analogy, producing totally unexpected conclusion and solution. This provokes varied responses among peers and caused delayed publication.

If the problem is that the solution comes from somewhere unexpected and from the most unlikely person, has something to do with the 'tall poppy syndrome', 'why Bill Gates, not me?' or 'this must be stopped as it will put my research out of business' (the latter is incorrect as it may close some venues but open more others). Well, it is only history on major scientific discoveries repeating itself though more compounded in this case but harder at Internet age.

Ignoring a 'controversy of an attention seeker' neither applies nor will it work. Using biased or imagined "technical errors" for delaying or a wishful drop of the research until, perhaps it re-appears by someone of a better sounding name or institution, has nothing to do with the science or ethics of medicine. Delayed recognition will not change a fact. Ignoring the solution of MVOD/F syndrome puzzle may delay the arrest of a major hospital killer but does not harm the author. Knowing the reasons of my own insomnia, one sometimes wonders how some people manage to get a goodnight sleep?

Competing Interests

No competing interests.

Bibliography

1. O'Leary MJ and Bihari DJ. "Preventing renal failure in the critically ill". *British Medical Journal* 322.7300 (2001): 1437-1439.

2. Ghanem AN. "Magnetic field-like fluid circulation of a porous orifice tube and its relevance to the capillary-interstitial fluid circulation: preliminary report". *Medical Hypotheses* 56.3 (2001): 325-334.

3. Ghanem AN and Ward JP. "Osmotic and metabolic sequelae of volumetric overload in relation to the TUR syndrome". *British Journal of Urology* 66.1 (1990): 71-78.

4. Ghanem AN and Ghanem SA. "Volumetric Overload Shocks: Why Is Starling's Law for Capillary Interstitial Fluid Transfer Wrong? The Hydrodynamics of a Porous Orifice Tube as Alternative". *Surgical Science* 7.6 (2016): 245-249.

5. Pindoria N., *et al*. "Volumetric overload shocks in the patho-etiology of the transurethral resection prostatectomy syndrome and acute dilution hyponatraemia". *Integrative Molecular Medicine* (2017).

6. Ghanem KA and Ghanem AN. "Volumetric overload shocks in the patho-etiology of the transurethral resection prostatectomy syndrome and acute dilution hyponatraemia: The clinical evidence based on 23 case series". *Basic Research Journal of Medicine and Clinical Sciences* 6.4 (2017).

7. Ghanem KA and Ghanem AN. "The proof and reasons that Starling's law for the capillary-interstitial fluid transfer is wrong, advancing the hydrodynamics of a porous orifice (G) tube as the real mechanism". *Blood, Heart and Circulation* 1.1 (2017): 1-7.

8. Ghanem AN. "The Adult Respiratory Distress Syndrome: Volumetric Overload Shocks in Patho-Etiology, Correcting Errors and Misconceptions on Fluid Therapy, Vascular and Capillary Physiology". *Surgical Medicine Open Access Journal* 2.2 (2018): SMOAJ.000534.

9. Ghanem AN. "Volumetric Overload Shocks". Scholars Press USA (2018).

Volume 3 Issue 6 June 2019