POCUS OR POCLFAP? Or something...

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Some eight years ago I had my first experience with FATE protocol - I enrolled the course, got online learning modules, received tests and finally found myself in Linz, Austria for a hands-on workshop where I had my final exam. It was a bit of a shock, because I have never been exposed to such teaching and training concept before. It was simple and straight forward, tailored for doctors who are NOT cardiologists. It was completely different from the way I learned abdominal ultrasound, thyroid gland, breasts, etc. There were no "protocols" at the beginning of this century. At least not in my backyard, not in my country. Ultrasound diagnostics was a sub-specialty and one had to learn same theory and same skills in every detail, just like any radiologist.

Later I was exposed to POCUS concept through my involvement with American POCUS Certification Academy, and thigs became rather different over the last five years. Now POCUS is everywhere. If you type "POCUS ultrasound" in Google advanced search, you'll get 995.000 hits! Just a bit under MILLION! I'd say it's "jumpin' on a bandwagon"... But hey, who am I to judge!

Now, even after such initial amazement with FATE protocol, and after long hours, days and years of learning, writing and contemplating over the eternal enigma: "POCUS versus "comprehensive" ultrasound", I must say I am a bit disappointed. No matter how loud (and a bit aggressive) are the proponents of POCUS concept (and I consider myself one of the leading ones, a real pioneer in my country and region), POCUS is not getting in the direction where it's supposed to go. Why? Because we became slaves of "protocols", which promise to sky-rocket everyone's skills in matter of days. These protocols insist on simplicity even where it is very dangerous to simplify things. Also, protocols frequently neglect some "minor" pathology and conditions - which could be fatally misleading.

Just an example: eFAST protocol (extended Focused Assessment with Sonography in Trauma) teaches us five positions (I call it "Five P's"): examination of lungs for pneumothorax and pleural effusion, examination of pericardium (checking for tamponade), looking pouch of Morrison for ascites or intraabdominal hemorrhage, pouch of Koller for same pathology, and perivesical (suprapubic) space for free fluid. OK, seems quite sufficient, one would say. And includes lots of skills: almost complete lung ultrasound (LUS), at least one or two acoustic windows used in echocardiography, solid knowledge of ultrasound anatomy of upper right and left quadrant of abdomen, and solid knowledge of anatomical structures that make pouch of Douglas and Proust. Now, once the patient is checked by an eFAST certified physician, is it really over? We found no free fluid in pleura, peritoneum and pericard, there is no pneumothorax and that's it? Certainly NO! Did we look for spleen lesions? Does it happen in trauma? Of course, it does. But did we learn thorough exam of spleen on an average eFAST course? No. Did we learn how to recognize dissection of aorta? No. Rupture of diaphragm? Nope! So what do we do? Throw away our eFAST certificate and order a CT? No. Solution is: FORGET THE PROTOCOLS!

As time goes by, ultrasound machines get smaller and smaller. This comes (for the moment) with a prize: smaller the machine, smaller the number of piezoelectric crystals, smaller quality of image, no space for additional software, no enough measurements, frequently no Doppler, or no PW, CW or other features. Take into account these limitations and multiply them with limitations caused by insufficient training "by the protocol" - and what you get? Something that sarcastic observers would call "overrated gadgetry" - an image of POCUS as a bunch of inadequately trained physicians playing with some toys and pretending to do proper ultrasound! And that's exactly the worst possible thing that can happen to POCUS concept. Apparently, something must be done about it. What? Once more: Forget the protocols.

In some articles (even peer reviewed "scientific" papers published in respectable journals) POCUS is presented as yet another protocol!? As if we don't already have too much funny abrevations and protocols for just about anything. People who should help in introducing POCUS as a new step in development of modern medical diagnostic procedure are making it look like just another "crash course". And POCUS is certainly much more than that. It is not even a collection of eFAST, FATE, RUSH, BLUE, FEEL, HIMAP, LUS or GUCCI certificates (yes, "GUCCI" is the latest addition to the "gallery", and surprise - it was not created by Italians, but Portuguese, and it stands for "Global Ultrasound Check for the Critically Ill").

Not only that we have problems with radiologists, cardiologist and other specialists who still think they are God given to perform certain ultrasound exams, we even have family medicine physicians who continue with misinterpretation of POCUS. Check out this introduction from a "scientific" article printed in American Family Physician journal just a few years ago: "Point-of-care ultrasonography (POCUS) refers to limited ultrasound protocols performed at the patient's bedside by a clinician to assess for many conditions such as aortic aneurysm and pleural effusion." Limited? Why? Who sets the limits? And compared to what? I'd say it is completely wrong beginning. Next, it says "POCUS refers to limited ultrasound protocols" - and again, WHY? Why is POCUS reduced to "protocols"? Who changed the very simple definition, contained in the abbreviation? It is, once and forever, Point-of-Care ULTRASOUND. Nothing more, nothing less. Nowhere in the history of POCUS one can read: It is Point-Of-Care Limited Focus Assessed Protocol. Then it would not be called POCUS, but POCLFAP! Or something...

In conclusion: POCUS is at the moment still ages away from becoming regular fifth part of standard physical exam (inspection, palpation, percussion, auscultation, INSONATION). Years will pass before we see it as a part of curriculum in medical schools. Why? Because such is the destiny of all innovations, especially those that rearrange the positions in the system. For some, POCUS is taking away their privileges and image of "sole authority on the subject". They will definitely be against ultrasound machines in every doctor's pocket. For others POCUS will be "a giant leap into responsibility" which they will never make. It takes courage and some simply don't have it. Those of us who have made that step into the future are already experiencing everything good that is coming from one more huge clinical skill. True benefit from POCUS comes once it stops being "limited protocol", but a full scale diagnostic method comfortably used by all who were willing to learn it. Furthermore, time will come (maybe not in my age) when it will no longer be a matter of "dare to try" - but a MUST for anyone who wants to be a real medical professional. Let's not downsize our POCUS knowledge, certificates and specialty by reducing it to a "limited protocol" learned on a weekend workshop. There is nothing "limited" about it: either you do it, or not.

Further reading:

1. J. Tatars et al.: "Global Ultrasound Check for the Critically Ill (GUCCI) - a new systematized protocol unifying point-of-care ultrasound in critically ill patients based on clinical presentation", Dove Medical Press, 2019, Lisbon, Portugal

2. J. V. Alonso et al.: "Protocols for Point-of-Care-Ultrasound (POCUS) in a Patient with Sepsis; An Algorithmic Approach", Bull Emerg Trauma, 2019, Bournemouth, UK

3. P. Bornman, T. Barreto: "Point-of-Care Ultrasonography in Family Medicine", American Family Physician, 2018, USA