
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

The Journal of Emergency Medicine, Vol. 60, No. 5, pp. e135–e139, 2021

0736-4679/$ - see front matter

ELSEVIER

# Letter to the Editor

## ☐ SIMPLE TECHNIQUE FOR MEDICAL PHOTOGRAPHY IN THE EMERGENCY DEPARTMENT DURING THE COVID PANDEMIC—SAY CHEESE

☐ **To the Editor:**

Illustrative medical photography is increasingly used in emergency departments to document medical problems for making decisions and future usage, as it provides greater details in addition to written medical notes. Moreover, it has become an integral part of clinical documentation, patient and family instructions, record keeping, medical education, research, journal publication, etc. It adds defense against claims of medical malpractice (1). A close-up photo is required for better documentation as well as sharing it for professional, academic, and administrative purposes.

During this pandemic, social (physical) distancing has been practiced as a means to help slow down the spread of Coronavirus, which makes it difficult to take medical photographs. To overcome this difficulty, it is suggested to mount the smartphone onto a selfie stick and take photographs, as the stick is extendable to at least 1 meter of distance between the patient and the clinician (2). Using two hands on the stem of the stick, the phone can be maneuvered tactically to get the best angle and close-ups. Thus, the selfie stick assists in maintaining social distancing and prevents shaking and blurring of pictures without compromising patients' comfort, dignity, and privacy, in accordance with Health Insurance Portability and Accountability Act compliance (3). Hence, it was decided to find out the usefulness for medical photography of a selfie stick for smartphone.

A pilot study was attempted. The first four authors were asked to take medical photography of their consecutive 25 emergency cases with injuries, independently during their duty, using the same brand of smartphone and selfie stick, during the month of October 2020, after obtaining a written informed consent from patients. Thus, a total of 100 pictures were documented. The pictures taken by one author were sent to two of the other three by the senior author—without identifying the person—for analysis of the image regarding sharpness, color reproduction, illumination, contrast, entropy, and noise metrics. If there was any controversy between the two, the decision of the senior author was sought. Overall, 92 of 100 photos exhibited a clearly identifiable content ("good quality"). Eight were considered unacceptable picture quality due to unintentional camera shaking or use of flash in a situation with a bright background. Although many expensive smartphones with high-resolution cameras can capture good-quality images from a distance, this technique gave an opportunity to take close-up pictures with economical phones (4). This small innovation helped to record high-quality pictures using a smartphone with selfie stick without fear during this pandemic.

As the pictures were of good quality, it is likely that a selfie stick with smartphone may be a useful tool to those clinicians who don't have an expensive, high-resolution camera. With little training and stabilization of the selfie stick, pictures may be taken even in difficult circumstances. Because this method seems to be easy, reproducible, and affordable, students of health sciences may be taught on the usage of selfie stick with smartphone for medical photography, along with the legal and regulatory issues related to it (5).

Subramanian Senthilkumaran, MD
S.V. Arathisenthil, MDS
Ramachandran Meenakshisundaram, MRCP, PHD
Murugan Koushik, MBBS
Department of Emergency & Critical Care
Manian Medical Centre
Erode, Tamil Nadu, India

Narendra Nath Jena, MBBS, MPH
Department of Emergency Medicine
Meenakshi Mission Hospital and Research Centre
Madurai, Tamil Nadu, India

Ponniah Thirumalaikolundusubramanian, MD
Department of Internal Medicine
Trichy SRM Medical College Hospital and Research Centre
Irungalur, Trichy, India

http://dx.doi.org/10.1016/j.jemermed.2020.12.017

## REFERENCES

1. Bhangoo P, Maconochie IK, Batrick N, Henry E. Clinicians taking pictures–a survey of current practice in emergency departments and proposed recommendations of best practice. Emerg Med J 2005;22:761–5.
2. Chandrappa AB, Nagaraj PK, Vasudevan S, Nagaraj AY, Jagadish K, Shah A. Use of selfie sticks and iPhones to record operative photos and videos in plastic surgery. Indian J Plast Surg 2017;50:82–4.
3. Reynolds RA, Stack LB, Bonfield CM. Medical photography with a mobile phone: useful techniques, and what neurosurgeons need to know about HIPAA compliance. J Neurosurg 2019;132:260–4.
4. Liu CH, Lin IC, Lu JJ, Cai D. A smartphone app for improving clinical photography in emergency departments: comparative study. JMIR Mhealth Uhealth 2019;7:e14531.
5. Mars M, Morris C, Scott RE. Selfie telemedicine – what are the legal and regulatory issues? Stud Health Technol Inform 2018;254:53–62.


## ☐ ASSESSING PRETEST PROBABILITY IN THE DIAGNOSIS OF PULMONARY THROMBOEMBOLISM: IS IT TIME TO INCORPORATE POINT-OF-CARE COMPRESSION ULTRASONOGRAPHY (POC CUS) IN THE EXISTING SCORING SYSTEMS?

### ☐ To the Editor:

We read with interest the original research article titled "Assessing Pretest Clinical Risk of Pulmonary Thromboembolism in the Emergency Department: Proposal of a Simple Modification to the Wells' Score" by Spampinato et al. and published in the January 2020 issue of the esteemed journal *The Journal of Emergency Medicine* (1). At a time when the widely used pretest scoring systems like Wells score and Revised Geneva Score (including their minor variations/modifications) are known to suffer from low specificity, this article brings some ray of hope toward increasing the specificity of Wells score with a very simple, yet important, addition to the already existing protocol (2,3).

The importance of strict adherence to clinical decision-making based on pretest probability cannot be overemphasized, especially in the era of overuse of diagnostic facilities like computed tomography pulmonary angiography (CTPA) with disproportionately low yield, and not to mention the potential harmful effects of radiation and iodinated contrast media (4,5). Although benefits of using these scorings systems in the appropriate clinical setting are well known, it is time to look closely at the potential pitfalls/lacunae in the most commonly used scoring systems like Wells score and Revised Geneva Score.

Both Wells score and the Revised Geneva Score have allocated significant weightage for clinical symptoms/signs of deep vein thrombosis (DVT), which is well understood and justified. However, it is pertinent to mention here that clinical diagnosis of DVT can be challenging due to a number of conditions that may mimic DVT very closely in symptoms as well as signs. Ultrasonography techniques and technology have evolved significantly in the last two decades. A point-of-care (POC) 3-point compression ultrasonography (CUS) of the lower limb with or without color Doppler is an invaluable tool, which can be performed with great specificity (>90%), accuracy (>90%), and speed, even by emergency physicians, while a patient is being evaluated for possible venous thromboembolism (6–8). A POC 3-point CUS will significantly enhance objectivity and specificity to the already validated Wells as well as Revised Geneva scoring systems for suspected pulmonary thromboembolism. It will also help in appropriate clinical decision-making before ordering a CTPA study with potential for better utilization of diagnostic services and resources.

We propose that POC 3-point CUS of the lower limbs be included as part of both Wells and Revised Geneva scoring systems for suspected pulmonary thromboembolism. Numerical values/weightage for positive CUS could be the same as that for symptoms/signs in the existing scoring system. Specific studies will be required in the near future in this field before the actual potential/advantage of POC 3-point CUS is established scientifically.


Jyotindu Debnath, MD*
Vivek Sharma, MD, DNB†
*Army Hospital Research and Referral
New Delhi, India
†Formerly, Army Hospital Research and Referral
New Delhi, India


http://dx.doi.org/10.1016/j.jemermed.2020.11.035


## REFERENCES

1. Spampinato MD, Bucci S, Migliano MT, et al. Assessing pretest clinical risk of pulmonary thromboembolism in the emergency department: proposal of a simple modification to the Well's score. J Emerg Med 2020;58:385–90.
2. Wells PS, Anderson DR, Rodger M, et al. Derivation of a simple clinical model to categorize patients probability of pulmonary embolism: increasing the models utility with the SimpliRED D-dimer. Thromb Haemost 2000;83:416–20.
3. Le Gal G, Righini M, Roy PM, et al. Prediction of pulmonary embolism in the emergency department: the revised Geneva score. Ann Intern Med 2006;144:165–71.
4. Dhakal P, Iftikhar MH, Wang L, et al. Overutilisation of imaging studies for diagnosis of pulmonary embolism: are we following the guidelines? Postgrad Med J 2019;95:420–4.
5. Yan Z, Ip IK, Raja AS, Gupta A, Kosowsky JM, Khorasani R. Yield of CT pulmonary angiography in the emergency department when