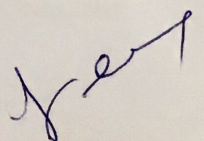


To Agora Rotary Club

Emergency medicine clinics are the departments that receive the most presentations to hospitals in Turkey. The number of patients presenting to emergency departments in Turkey in 2017 was 76.834.439, with 25.97% of examinations by all departments being performed by emergency medicine departments, followed by internal medicine departments at 9.09%. Our hospital's emergency medicine clinic served 266.117 patients in 2017, of whom 255.564 were from the yellow and red code emergency patient groups. These are patients with a high probability of severe disease and with a risk of life-threatening complications if diagnosis is delayed or missed. All patients in this group require extra tests such as ultrasound, x-ray, computed tomography, and laboratory tests. Of these patients, 4.627 were code red cases with significant threats to life, and 13.581 involved sudden and possible life-threatening injuries occurring in healthy young people, such as traffic accidents or falls from heights and other traumas. According to our data for 2017, 745 patients suffered cardiac arrest and underwent heart massage (cardiopulmonary resuscitation). None of these cardiac arrest patients, a significant proportion of patients given red code, and some injury cases, will not be sufficiently stable to be sent for tests such as computed tomography or x-ray. Procedures such as computed tomography, for instance, are time-consuming, and since patients with cardiac arrest require heart massage, none of these tests that would entail the interruption of heart massage can therefore be performed in these cases. Similar problems are encountered across the world. Portable ultrasound devices are now widely used in the evaluation of patients with such life-threatening conditions or cardiac arrest, in order to overcome this problem, particularly in countries in which emergency medicine is highly advanced, particularly the USA. These devices, which are portable and do not involve radiation, in contrast to other tests, can be brought to the patient without requiring the subject to be moved to other departments for imaging. Diseases capable of compromising the patient's status have thus begun being identified at the bedside. Significant decreases in mortality and disability have been achieved in countries using bedside ultrasound, together with significant decreases in other tests involving radiation (reference 1). Various protocols have now been developed and implemented for the evaluation of critical emergency patients using ultrasound (reference 2,3,4). Mastering these protocols and learning the use of the ultrasound device require specific training. The Emergency Medicine Association of Turkey has been organizing training sessions to improve the ultrasound use skills of emergency physicians in Turkey for some 10 years, and has been providing online training to improve the quality of that instruction for



approximately the last three years (<https://www.tatdus.org/>.) One specialist physician in our hospital emergency department has been serving as an instructor in the ultrasound study group for some six years.

Forty emergency medicine residents are currently receiving training in our hospital's emergency medicine clinic. Every year, five to 10 of these graduate as emergency medicine specialists and are then dispersed to various provinces and districts of Turkey, being replaced by the same number of new emergency medicine residents. Proper management of critical emergency patients using ultrasound devices is one of the most current topics in emergency medicine resident training worldwide. In order to enter the specialty examination, residents completing their specialty training have to prepare an academic study in the form of a specialization thesis. Academic studies involving ultrasound are closely monitored by our specialists responsible for residents training in our clinic. These specialists have themselves previously published numerous academic studies concerning ultrasound use in prestigious medical journals (reference 5, 6, 7, 8, 9, 10, 11). One academic study have currently been planned and received ethical committee approval, but have been unable to begin due to the lack of elective ultrasound (ethical committee approval no: 51). Another six studies have been planned as completion theses and delayed due to lack of adequate ultrasound equipment. A physician producing a thesis regarding ultrasound use will of course be familiar with the current academic literature on the subject in question, and will have acquired a certain level of experience regarding the use of the device in that field when the study is completed. Physicians who have worked on this subject will potentially be in a position to transfer their experience to newly qualified doctors at the medical association level or as instructors at universities. They may also be expected to provide a higher quality of service to the patients they serve, and to take their knowledge and experience to those institutions to which they are appointed in the future.

Bedside ultrasound is the only means of identifying the underlying disease in significant numbers of critical patients and in all patients with cardiac arrest undergoing heart massage who cannot be taken for tests such as computer tomography. It is also the only device suitable for the emergency department that does not cause radiation damage but is still capable of identifying disease in pregnant women and children. We plan to use the advanced ultrasound device whose purchase we are requesting on approximately 25.000 patients a year. In 2017, 745 such patients suffered cardiac arrest and underwent heart massage, and this device will be the only means of identifying the underlying disease in such cases. At the same time, the

device will enable 40 emergency medicine resident doctors and the residents of the future to receive world-class training, will permit them to become experienced academics in the field of ultrasound by producing thesis studies on the subject, and will enable them to carry that training with them to the institutions to which they are posted after graduation. I hope, I have explained the importance of having a new and high quality ultrasound device in our emergency clinic.

Best Regards

Adnan Yamanoglu, MD

Izmir Katip Celebi University, Ataturk Training and

Research Hospital, Department of Emergency Medicine,

Basın Sitesi-Izmir 35360/ TURKEY

Telephone : +90 0543 222 25 70

: +90 (232) 244 44 44

Fax : +90 (232) 243 15 30

Email : adnanyaman29@gmail.com

References

1. Lawrence A. Melniker, MD, MS Evan Leibner, MD et al. Randomized Controlled Clinical Trial of Point-of-Care, Limited Ultrasonography for Trauma in the Emergency Department: The First Sonography Outcomes Assessment Program Trial. *Annals of Emergency Medicine*. Volume 48 no3 : September 2006
2. Scalea, Thomas M. MD; Rodriguez, Aurelio MD; Chiu, William C. MD; Brenneman. Focused Assessment with Sonography for Trauma (FAST): Results from an International Consensus Conference. *The Journal of Trauma: Injury, Infection, and Critical Care*: March 1999 - Volume 46 - Issue 3 - p 466-472

3. Scott D. Weingart, MD RDMS, Daniel Duque MD RDMS, Bret Nelson MD RDMS. The RUSH Exam: RapidUltrasoundforShockandHypotension. <https://emerit.org/rush-exam/>
4. Dina Seif,¹ Phillips Perera,² ThomasMailhot,¹ David Riley,³ and DikuMandavial. BedsideUltrasound in ResuscitationandtheRapidUltrasound in Shock Protocol.Hindawi Publishing Corporation Critical CareResearchandPractice Volume 2012, Article ID 503254, 14 pages doi:10.1155/2012/503254
5. NGÇ Ymanoğlu, A Ymanoğlu, İ Parlak, P Pınar, A Tosun, B Erkuran. The role of inferior vena cava diameter in volume status monitoring; the best sonographic measurement method? The American journal of emergency medicine 33 (3), 433-438
6. A Ymanoğlu, NGÇ Ymanoğlu, İ Parlak, P Pınar, A Tosun, B Erkuran. The role of inferior vena cava diameter in the differential diagnosis of dyspneic patients; best sonographic measurement method? The American journal of emergency medicine 33 (3), 396-401
7. A Yamanoglu, NG Celebi Yamanoglu, O Sogut, M Yigit, D Tas, N Saclı. A comparison of noninvasive methods for early detection of hemorrhage: Inferior vena cava ultrasonography and spectrophotometric hemoglobin levels Journal of Clinical Ultrasound 47 (5), 278-284
8. S Bilgin, FE Topal, A Ymanoğlu, U Payza, Z Karakaya, PY Akyol. Effect of Changes in Intravascular Volume on Inferior Vena Cava and Aorta Diameters and the Caval/Aorta Index in Healthy Volunteers Journal of Ultrasound in Medicine
9. N Satılmış Siliv, A Yamanoglu, P Pınar, NG Celebi Yamanoglu, F Torlak Estimation of Cardiac Systolic Function Based on Mitral Valve Movements: An Accurate Bedside Tool for Emergency Physicians in Dyspneic Patients . Journal of Ultrasound in Medicine 38 (4), 1027-1038
10. How much can synthetic cannabinoid damage the heart? A case of cardiogenic shock following resistant ventricular fibrillation after synthetic cannabinoid use A Yamanoglu, NG Celebi Yamanoglu, T Evran, O Sogut Journal of Clinical Ultrasound 46 (9), 605-609
11. Evaluation of the Diagnostic Role of Bedside Lung Ultrasonography in Patients with Suspected Pulmonary Embolism in the Emergency Department

Hüseyin Acar, Serkan Yılmaz, Elif Yaka, Nurettin Özgür Doğan, Asım Enes Özbek,
Murat Pekdemir Balkan medical journal 2017
DOI:10.4274/balkanmedj.2016.1181

Uzm. Dr. Adnan YAMANOGLU
Katip Çelebi Üniversitesi
İzmir Atatürk Eğt. ve Ars. Hast.
Acil Tıp Uzmanı
Dip. Tes. No: 129294

Dr. Selma Kundak.

IZMIR KATIP ÇELEBİ ÜNİVERSİTESİ
ATATÜRK EĞİTİM VE ARAŞTIRMA HASTANESİ
Uzman Dr. Selma Kundak
Başhekim

IZMIR KATIP ÇELEBİ ÜNİVERSİTESİ
ATATÜRK EĞİTİM VE ARAŞTIRMA HASTANESİ
Prof. Dr. Ali Gürbüz
Başhekim