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LETTER TO THE EDITOR

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Wet Lab of Ocular Trauma Models and Primary Suturation Techniques on Pig Eyes

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We live in a geographical region not only with many work and traffic accidents, domestic violence, but also wars and terrorist attacks around. The eyes are one of the most injured organs in all body injuries. (1) Most of the open globe injuries include zones 1 and 2. (2) These are real ophthalmologic emergencies and require urgent treatment. Primary suturation helps both preservation of the globe integrity and prevention from endophthalmitis. Here a question comes to mind. How much the ophtalmologists are experienced in this issue? In daily practice this kind of cases are usually treated by the most experienced surgeons in the clinic. Therefore, it is very valuable to increase the experience of young colleagues. Wet lab or simulator training is very useful to fill the gap in this topic. In a study preoperative simulator training prepared residents for the operating room as effectively as the wet lab, there was no significant difference in overall score between the 2 groups. (3) In another EyeSi simulator training there has been 68% reduction in errant capsulorhexes rates. (4) Many studies have been published since 1998 about wet lab in every section of ophthalmology.(3,5) Pig eyes are mostly used as wet-lab teaching model.

As the former chair and executive board of Turkish Society of Ergophthalmology and Medicolegal Ophthalmology (TSEMO) we planned a wet lab of trauma models and primary suturation techniques on pig eyes. We aimed to find solutions to the situations that are encountered frequently in especially the last years of residency training and in the daily practice of newly graduated specialist level by conveying them approach to ocular trauma patient, general classification of globe injuries, suturing techniques and suturing tips. During the last year we performed two courses with 50 participitants. Due to the intense interest, bookings were full in the first days. These wet labs were done in two stages. In the first stage, general theoretical information were given in approximately one hour by five trainers. In the second stage, 5 groups of 10 ophthalmologists had practical courses for 45 minutes (Figure 1). Each two candidates had practice by one trainer about basic microsurgical suturing techniques, needle and suture types, algorithms used for placement of these sutures used to close the wound sites due to incisions created in eye. The pig eyes were positioned in the eye sockets of a model head and stabilized with a pin. A central irregular corneoscleral laceration was created in two steps and sutured by 10/0 nylon and 8/0 vicryl sutures (Figure2). Participants then completed satisfaction questionnaires regarding their preoperative training. The porcine model worked well to demonstrate and perform steps associated with wet-lab environment improves trainee confidence in these procedures. Our questionnaires, like many studies confirm the importance of mentorship and that

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Figure 1: Working stations and microscopes in the wet lab.

Figure 2: Microsurgical suturing techniques training under the supervision of the trainer.

the accompaniment of an experienced colleague during the learning curve is associated with lower rates of complications. We think that wet laboratories will become an increasingly important aspect of a comprehensive ophthalmology training program.

On this occasion, I would like to inform you that two wet labs will be held in Istanbul Turkish Ophthalmology Association Education Center (TODEM) on 16th of February and 7th of June 2020.

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