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Introduction:
Medical simulation is a modern teaching tool increasingly used in specialties such as anesthesia, emergency medicine and obstetrics. However, it’s not widely used in specialties like cardiology, although cardiovascular emergencies are very frequent. The purpose of our study was to assess the effectiveness of simulation-based medical education in the management of cardiovascular emergencies among moroccan graduate students.

Methods:
We conducted a prospective, observational, multi-centre study including the students of three moroccan universities from the 5th to the 7th year of medicine who underwent 6 phases: First a pre-test, then a theoretical and practical training on cardiovascular emergencies after which the students were separated in two groups, one undergoing the medical simulation training (group 1) and one who didn’t (group 2), followed by a theoretical then a practical post-test on Resusci Anne and SimMan®. At last, the students were asked to answer a satisfaction survey.

Results:
57 students were enrolled in the study and divided into 2 groups (Group 1, N= 25 and Group 2, N=27). Both groups were comparables in terms of year of study, faculty and their previous internships as well as a former participation in medical simulation. The pre-test results were comparable between the two groups (6,05±2,68 for group 1 versus 5,88±2,52 for group 2). However, both theoretical post-test results (18,83±1,27 versus 17,13±2,01 for group 2, p<0,001) and practical evaluation results (16,15 ± 1,72 versus 10,92 ± 1,35, p< 0,001), were in favor of group 1.

Conclusion:
This preliminary study showed the significant benefit of simulation-based medical teaching and learning as an innovating teaching tool in the cardiovascular emergencies in the medical students’ basic training and suggests its generalization to the cardiology and intensive care interns’ continuous training.