

EFFECT OF DIABETES MELLITUS ON THE CHRONIC KIDNEY DISEASE DEVELOPMENT

Alrabia Uqd Alzahraa Dawood, Folami Victor, Kanu Onyedikachi, Praise Odeigah, Karpovich Y. I., Bogdanovich V. Ch., Karpovich Y. L.
Grodno State Medical University, Grodno
poluhovich1@gmail.com

Comprehensive analysis of clinical data, Cockcroft -Gault formula application, and albumin/creatinine ratioassessment was carried out for 18patients (6 males and 12 females of mean ages of 65 and 66 years respectively and mean diabetes duration of 15years); results show evident risk of progression of CKD in diabetic patients with the need for risk modifying treatment.

4TH-YEAR STUDENTS TRAINING TO PERFORM CARDIOPULMONARY RESUSCITATION IN PREPARATION FOR NURSING STAFF MEDICAL ACTIVITIES ACCREDITATION

Kovaleva E.M.
Pirogov Russian National Research Medical University, Moscow
kovaleva-em@yandex.ru

Introduction. Nursing staff medical activities accreditation (accreditation) is one of the essential stages in medical student education. Accreditation includes solving test and situational tasks and performing certain practical skills. Cardiopulmonary resuscitation (CPR) is one of the most important first aid practical skills and emergency primary pre-medical and medical care skills [2]. So, it applies to training students to perform CPR. Acquaint students with the current exam requirements and the studied algorithm demonstration features at the exam are necessary, too. Also passing the exam, medical students may work as nurses and paramedics and participate in formation of a reserve in case of disasters [4]. Therefore, improving the quality of exam preparation, especially in terms of CPR, is relevant.

The purpose of the research is an evaluation of students' CPR performance skills in accreditation preparation. The effectiveness of CPR algorithm training conducted within the framework of the disaster medicine department students scientific club (SSC) meetings is needed to be evaluated too.

Materials and methods. The CPR algorithm knowledge of the 105 4th-year students of Pirogov Medical University was evaluated. There are used evaluations by approved accreditation checklists before and after studying the algorithm at a disaster medicine department students' scientific club meeting. The algorithm was appraised according to the main points of the checklist: diagnosis of the victim's condition, calling emergencies, preparation for chest compressions, performing compressions.

Research results. The training to CPR algorithm performance was carried out in several stages. The first stage was to assess students' knowledge of the CPR algorithm. The second stage comprised the analysis of the theoretical part. Students studied the features of the CPR algorithm currently used and the requirements for performing CPR on accreditation. At the second stage, the head of the SSC, or a student tutor, also showed CPR. The third stage was the students' exercise of CPR skills on an interactive simulator. Importantly, the head of the SSC and the tutor helped the students to sort out and correct the mistakes made.

The CPR algorithm knowledge and methods of it studying were always checked before starting training. This is necessary to increase the productivity of working with students at the next stages. Thus, 23.8% of the students who took part in the research reported that they had studied the CPR algorithm only in other departments before. The remaining 76.2% studied the algorithm by themselves additionally before the start of CPR training in the classes of the disaster medicine department SSC.

All students got the same type of task in the first stage and were on equal terms when performing the CPR algorithm. According to the results of the first stage of training, it was revealed, on average, the accuracy of CPR in percentage terms is 75.12%. The average number of made mistakes is 8 in the accreditation checklist points. Chest compression was appraised on indicators of the interactive simulator and visually [3]. Students made mistakes in the victim's breathing diagnosis in the airway's opening up. 38.1% of students made a mistake in performing this action. Mistakes were often observed in calling emergencies. 20% did not call emergencies at all, 13.3% called emergencies at the wrong time. Moreover, students made mistakes in the accompanying information about the situation for specialists. Students did not inform the emergencies of the coordinates of the accident site (34.7% of students), the number of victims (40.9%), the gender (34.7%) and age (34.7%) of the victims. 38.1% of students were wrong in the identification of the chest compressions application point. In particular, 23.8% of students performed chest compressions at a point located a few centimeters to the left of the edge of the sternum. The main number of mistakes was in the technique of performing compressions. Thus, 61.9% of students didn't hold their hands vertical, and 44.8% of students bent their arms at the elbows, 27.6% had interruptions in compressions. For this reason, 75.2% of students could not achieve adequate compression depth, and 37.1% - adequate frequency. It is important to note that several students were not aware of changes in the CPR algorithm because of the spread of coronavirus infection, 20% of students made a mistake in the victim's breathing diagnosis because of bending over the victim's mouth and nose, 3.45% performed artificial lung ventilation (ALV).

The CPR training second stage was to study theory. Currently, an updated CPR algorithm is being used to provide first aid to an unconscious victim with respiratory and circulatory arrest. So, the previous version of the algorithm included the breathing diagnosis by using the "hear-see-feel" method and performing ALV [3]. First, in comparison with the previous version, the new algorithm requires the use of personal respiratory protection equipment for both the rescuer and the victim.

Second, it allows only a visual breathing diagnosis. Third, it excludes ALV. Consequently, the theoretical part included a detailed analysis of the steps of the algorithm according to the European Resuscitation Council and approved accreditation checklists. In addition, special attention was paid to the sequence of actions in the checklists. As for the requirements, to pass CPR, students for accreditation must make at least 90% of correct chest compressions with adequate depth (5-6 cm) and frequency (100-120 compressions per minute) and score at least 80% for the whole algorithm. [1,5]

In the third stage of CPR training, students needed an average of 3 to 5 repetitions of the entire CPR algorithm to memorize it. Besides, it helped them to correct most of the errors that were before the theoretical part. So, on average, the accuracy of CPR in percentage terms became 93.8%, and the average number of errors was 2. Only 5.6% of students made mistakes in the diagnosis of consciousness and breathing, and 6.6% in the emergency call algorithm. Performing chest compressions, 3.8% of students determined the compressions application point incorrectly. The quality of performing compressions has improved in most of the students. Accordingly, 65.2% of students had an adequate depth of compression, and 76.2% - an adequate frequency after the first training.

Conclusions. In summary, the three-stage CPR training system for 4th-year students to accreditation preparation is quite effective. It allows improves the results in a short time significantly. So, special attention in students' preparation should be paid to checklist points the greatest number of errors is made. It is a diagnosis of the victim's condition, and technique of chest compressions (hand position, depth, and frequency of compressions) should be practiced, too.

References:

1. Gavin D. Perkins, Jan-Thorsen Gräsner, Federico Semeraro, European Resuscitation Council Guidelines 2021: Executive summary, Resuscitation, Volume 161, 2021, Pages 1-60,
2. Isakov I.A., Kovaleva E.M., Lopanchuk P.A., Merdalimov R.G., Kostyuchenko M.V. Preparation of students for certification for admission to work by nursing staff / Collection of scientific papers of the III All-Russian scientific and practical conference "Medicine of disasters: teaching, science and practice", Moscow, November 22, 2019.-p.183-189
3. Koenraad G. Monsieurs, Jerry P. Nolan, Leo L. Bossaert, European Resuscitation Council Guidelines for Resuscitation 2015 Section 1. Executive summary, Resuscitation, Volume 95, 2015
4. Levchuk I.P., Nazarov A.P., Kostyuchenko M.V. Actual problems of preparing graduates of medical universities to work in emergency situations / Department of traumatology and orthopedics, Moscow, 2016. – p.153
5. Passport of the examination station "Basic cardiopulmonary resuscitation" / Methodological center for accreditation of specialists – 2021(https://fmza.ru/upload/medialibrary/a9e/pasport_bazovaya-slr_pa_19.05.2021.pdf)