

ORIGINAL ARTICLE

CURRENT ASPECTS OF THE CONTINUING MEDICAL EDUCATION OF DOCTORS ON MANAGEMENT OF PATIENTS WITH MULTIMORBIDITY AND COMORBIDITY

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Dmitro Diachuk, Galina Moroz, Tatyana Lasytsia, Olena Dzizinska

STATE INSTITUTION OF SCIENCE "RESEARCH AND PRACTICAL CENTER OF PREVENTIVE AND CLINICAL MEDICINE", KYIV, UKRAINE

ABSTRACT

The aim: To assess the current approaches to training doctors to manage patients with multimorbidity or comorbidity and the awareness of physicians of the State Institution of Science "Research and Practical Center of Preventive and Clinical Medicine" State Administrative Department (SIS "RPC PCM" SAD) of this problem.

Materials and methods: 88 medical doctors of SIS "RPC PCM" SAD were interviewed anonymously, using the specially designed questionnaire. The age of respondents varied from 32 to 72 years; the average age was $53,1 \pm 1,2$ year; the average length of service was $27,8 \pm 1,4$ years. The doctors were divided into two groups: the 1st one included 56 general practitioners, the 2nd group – 32 doctors – consisted of cardiologists, rheumatologists, neurologists and endocrinologists.

Results: The results of the sociological survey showed that $94,3 \pm 2,5\%$ of SIS "RPC PCM" SAD medical doctors pay attention to the presence of comorbid pathology in patients with coronary artery disease (CAD) during the appointment of examination and treatment. Introduction of the module «Comorbidity in patients with coronary artery disease: current requirements for treatment» into the postgraduate medical education curriculum is considered necessary by $95,5 \pm 2,2\%$ of the interviewees. No statistical difference was found between the 1st and the 2nd respondent groups ($p=0,55$).

Conclusions: The results of the study substantiate the necessity of implementation of continuing medical education of doctors (general practitioners, cardiologists, rheumatologists, neurologists, endocrinologists) on management of patients with multimorbidity and comorbidity using interactive live workshops and online case studies.

KEY WORDS: continuing medical education, comorbidity, multimorbidity

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INTRODUCTION

Today's society is characterized by an increase in the number of older people. It is projected that in 2050 the proportion of persons ≥ 65 years will be 20% of the world population, the number of persons ≥ 80 years will reach 447 million [1]. Aging is a major risk factor for multiple chronic diseases, including cancers and cardiovascular diseases, type 2 diabetes, cognitive impairment and their combined course [2, 3]. Patients with multiple chronic conditions often have poorer health outcomes, such as decline in physical and mental health, higher mortality rates and frailty. Their needs for medical care are also varied. Instead of a highly specialised, but isolated approach, as the one used for single disease treatment, multimorbidity patients need a complex and structured care plan [2, 4]. Increasing prevalence of comorbid diseases and conditions in patients with cardiovascular disease has a significant medical and social importance [2, 5]. The problem of optimizing medical care for multimorbid patients and training of medical staff is urgent [6]. These are complex and interrelated issues: patients with multimorbidity form a heterogeneous group – there is a huge number of disease combinations, each with individual requirements, therapeutic strategies and goals. The scarcity of published research on the training of physicians on these issues may be due to the fact that the concept of multimorbidity is rela-

tively new, and the process of accumulating evidence on the effectiveness of the use of proposed therapeutic strategies to optimize care for such patients is still ongoing. Therefore, developing approaches to train physicians in the problem of comorbidity and multimorbidity is essential.

THE AIM

The aim was to assess the current approaches to training doctors to manage patients with multimorbidity or comorbidity and the awareness of physicians of the State Institution of Science "Research and Practical Center of Preventive and Clinical Medicine" State Administrative Department (SIS "RPC PCM" SAD) of this problem.

MATERIALS AND METHODS

88 medical doctors of SIS "RPC PCM" SAD were interviewed anonymously, using the specially designed questionnaire. The age of respondents varied from 32 to 72 years; the average age was $53,1 \pm 1,2$ years; the average length of service was $27,8 \pm 1,4$ years. The doctors were divided into two groups; the 1st one included 56 general practitioners, the 2nd group consisted of 32 doctors – cardiologists, rheumatologists, neurologists and endocrinologists.

The survey questionnaire included two blocks of questions. The first block was dedicated to identification of comorbid pathology and risk factors in patients with coronary artery disease (CAD); the second block of questions pertained to the organization of postgraduate medical education of doctors of SIS "RPC PCM" SAD regarding the modern aspects of treatment of patients with CAD and comorbidity.

Statistical data analysis was performed by the use of standard statistical package (Statistica v. 6.0) and Microsoft Excel 2007. Categorical data were presented as absolute and relative (%) frequency. To enable comparisons, we calculated the mean value (M), and the standard error of the mean (m). Student's t-test was used to compare the mean of a data for the two groups.

RESULTS

The results of the sociological survey showed that the physician of SIS "RPC PCM" SAD comprehensively assess the health status of patients: 83 of 88 (94.3±2.5%) respondents pay attention to the presence of comorbid pathology in patients with CAD during the appointment of treatment – 55 of 56 physicians (98.2±1.8%) in the first group and 28 of 32 (87.5±5.8%) in the second ($p=0.09$). No statistical difference was found between the 1st and the 2nd groups of respondents.

An important component of the treatment of patients with CAD and comorbid pathology is the control and correction of risk factors. Overall, 85 of 88 physicians (96.6 ± 1.9%) indicated that the need for monitoring and correction of risk factors was always discussed with patients: 54 of 56 physicians (96.4 ± 2.5%) of the first group and 31 of 32 (97.9 ± 2.5%) of the second ($p = 0.67$).

The doctor–patient consultation is critical in the appropriate management of patients with comorbidity. Most often, doctors: discuss the need for quitting smoking – 72 of 88 (81.8 ± 4.1%) doctors: 44 of 56 (78.6 ± 5.5%) of the first group and 28 of 32 (87.5 ± 5.8%) in the second ($p = 0.28$); recommend weight control – 72 of 88 (81.8 ± 4.1%) physicians: 44 of 56 (78.6 ± 5.5%) in the first group and 28 of 32 (87.5 ± 5.8%) in the second ($p = 0.28$); provide healthy nutrition recommendations 70 of 88 (79.5 ± 4.3%) physicians: 39 of 56 (69.6 ± 6.2%) in the first group and 31 of 32 (96.9 ± 3.1%) in the second ($p = 0.001$). All doctors indicated that they recommend that patients to monitor their blood pressure and follow their doctor's recommendations for treatment. The SIS "RPC PCM" SAD physicians' recommendations of risk correction are provided to patients verbally and in writing. We also summarized the data on the reasons that prevent doctors from discussing the need for risk factors correction with patients – 65 of 88 (73.9 ± 4.6%) respondents referred to "lack of time": 37 of 56 (66.1 ± 6.3%) physicians in the first group, 28 of 32 (87.5 ± 5.8%) in the second ($p = 0.01$).

The following block of questions, which was included in the sociological survey, was related to the organization of continuing medical education of the SIS "RPC PCM" SAD doctors. On the question «Do you need a section for doctors in the computer network of SIS "RPC PCM" SAD, which would contain up-to-date materials on the treatment of comorbid conditions in patients with coronary artery disease?» 84 of 88 (95.5 ± 2.2%) physicians responded positively: 54 of 56 (96.4 ± 2.5%) physicians in the first group, and 30 of 32 (93.8 ± 4.4%) in the second ($p = 0.55$). Introduction of the module «Comorbidity in coronary artery

disease: current requirements for treatment» in the postgraduate education curriculum is considered necessary by 84 of 88 (95.5 ± 2.2%) interviewed doctors, 54 of 56 (96.4 ± 2.5%) in the first group and 30 of 32 (93.8 ± 4.4%) in the second ($p = 0.55$).

Thus, the results of our previous studies on the prevalence of comorbid conditions in patients with coronary artery disease [7] and data from a sociological survey substantiate the feasibility of training doctors in this issue.

DISCUSSION

The results of our study confirmed that not only general practitioners, but also doctors of other specialties, including cardiologists, neurologists, rheumatologists, endocrinologists, need to increase theoretical and practical knowledge on the treatment of patients with comorbidity. The organization of the educational process is essential for the introduction of postgraduate medical education. This requires generalizing current approaches to physician training for managing patients with multimorbidity or comorbidity.

A systematic review of the literature, dedicated to postgraduate training of doctors to manage patients with multimorbidity, was performed in 2016 by C. Lewis et al. [8]. The review addressed the evaluation of all studies published at that time regarding the outcomes of postgraduate medical education in the management of multimorbid patients [8]. Overall, 75,110 citations were screened, of which 65 full-text articles, but only two studies met the inclusion criteria for the review [9, 10]. The two included studies implemented and evaluated multimorbidity postgraduate training programs of doctors, and highlighted the need for further research.

K. Andolsek et al. [9] compared two options for organizing physician training for managing patients with multimorbidity. The study group included 307 doctors, the control group – 605. The study group of doctors visited workshops, which comprised two parts: a large group presentation, during which guidelines, algorithms, and clinical evidence were summarized by primary care faculty, and a follow-up – small group discussions on developing plans for the diagnosis and management of a number of complex case scenarios. The control group in this study did not attend the live workshop, but completed a complex cases module online which incorporated the content of the workshop and evidence-based strategies for management of patients with multimorbidity. The effectiveness of the online module was measured using the same questionnaire [9]. The authors report that immediately following the workshops, nearly all participants indicated the increasing their knowledge and competence (96% and 89%, respectively). Participants of the online module also demonstrated statistically significant and substantial improvements in knowledge. Significant knowledge gains ($p < 0.001$) were observed on 17 of 18 assessment questions that addressed all therapeutic areas. Andolsek et al. did not find significant differences in outcomes when workshop training was compared with an online learning module completed by their control group. The authors concluded that interactive educational activities that discuss complicated case scenarios can improve participant application of evidence based medicine for patients with multiple chronic comorbidities, however, there remain many questions about optimizing physicians' training on these issues [9].

Maguire S et al. [10] found that the general practitioners, who attended a pilot workshop improved their knowledge of the characteristics of multimorbidity (80 % of correct responses after the workshop compared with 25% before the workshop). All trainees reported improved understanding and increased confidence in the management of patients with multimorbidity in the community. The workshops applied the approach of simulated multibody cases and analysis of the clinical situation with the participation of experienced general practitioners. The authors concluded that the use of such training model improves knowledge of and confidence in managing multimorbidity in primary care [10]. The feasibility of using this approach is justified by both Knowles's adult learning theory and Kolb's model of experiential learning, in which concrete experience is followed by reflection, abstract conceptualization, and subsequent active experimentation [8].

Given the diversity of doctors to be trained, and the importance of training in this area to be an ongoing, realistic learning experience, updated over time in a continuing medical education scenario, it is unlikely that a single-delivery format will suit all participants. This may present an opportunity to utilize distance learning or remote learning modules [8]. It is important to enhance the competence and confidence of doctors in managing this challenging population of patients, with the ultimate aim of improving clinical outcomes [9, 10, 11]. Optimal educational format is a significant issue which needs further research.

CONCLUSIONS

The results of our studies substantiate the necessity of implementing continuing medical education of doctors (general practitioners, cardiologists, rheumatologists, neurologists, endocrinologists) of SIS "RPC PCM" SAD on management of patients with multimorbidity and comorbidity. Based on the results of the generalization of scientific publications during the implementation of the module «Comorbidity in patients with coronary artery disease: current requirements for treatment» in the post-graduate medical education curriculum new interactive live workshops and online case studies shall be developed.

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ORCID and contributionship:

Dmitro Diachuk: 0000-0003-4583-4909^{A,F}

Galina Moroz: 0000-0003-4329-7193^{A,D,F}

Tatyana Lasytsia: 0000-0003-1971-5084^{B-D}

Olena Dzizinska: 0000-0002-1884-3175^{D-E}

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CORRESPONDING AUTHOR

Olena Dzizinska

Research and Practical Center of Preventive and Clinical Medicine

5 Verkhnia St., 01014 Kyiv, Ukraine

tel: +380676056921

e-mail: dzizinskaya@gmail.com

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