

KNOWLEDGE ON TRANSFUSION MEDICINE AMONG THE STUDENTS OF THE FACULTY OF NURSING AT THE UNIVERSITY OF TIRANA

TATJANA NURKA, ROBERT ÇINA, MERI GJINUSHI, IRENA KITO,
IRIDA PANO, ESMERALDA HOXHA, VJOLLCA HAJRO

Abstract

The transfusion of blood and its components is intended to provide safe medical treatment and to achieve satisfying results in different therapies. Many important processes in transfusion depend on the nurses. Their knowledge on the subject is fundamental.

Objective: The objective of this study is to evaluate the knowledge obtained in the field of transfusion medicine at the Faculty of Nursing. We also aimed to evaluate the efficiency of the present curricula during the bachelor program and to make suggestions to improve the program completing the necessary knowledge in transfusion medicine.

Material and methods: Our study was based on the evaluation of a questionnaire which was distributed without any prior announcement to 254 students of various master programs at the Faculty of Nursing. The questionnaire consisted of four sections. The first section of the questions concerned with general data about the groups. The second section included questions on ethics and regulations on blood transfusion. The third and the fourth section included technical questions and questions on procedures on blood transfusion. Students were divided into two groups: first group consisted of 139 students enrolled in the second cycle of the Scientific Master Research, of which 75 students had no

working experience and 61 students were employed in clinics that practiced blood transfusion.

The second group consisted of 118 students of which 91 were admitted directly after the studies and 27 having worked in the medical structures, 16 of them working in clinics that practice blood transfusion. Our findings show the lack of knowledge in the field of transfusion medicine taken at the bachelor level. Our findings suggest that the knowledge in the field of transfusion medicine is insufficient among all the studied groups, independently from the results obtained in bachelor studies or the working experience.

Key words: transfusion medicine, nursing, curricula, learning.

Introduction

The transfusion of blood and its components is intended to provide safe medical treatment and to achieve satisfying results in different therapies. The use of blood transfusion is a medical treatment that carries some risks, which are often life threatening. Studies in recent years often show that blood or its components are frequently administered improperly [1-5].

Data from countries that have applied the haemovigilance system provide ample evidence of the risks that come as a result of medical negligence [3-6]. There may be errors in determining the blood group of patients, transfusing blood or blood components in the wrong patients, negligence in monitoring the

transfusion etc. About half of the errors occur in the clinics [incorrect identification of the recipient to the blood unit, phlebotomy errors, failure to recognize a transfusion reaction], and about 30% in the laboratory [7].

It is important that medical personnel have sufficient knowledge on transfusion. Many important processes in transfusion depend on the nurses. Various studies indicate that nurses and nursing students do not know and do not perform correctly procedures, starting and following a transfusion [8,9].

The nurses play an important role in the transfusion procedures and blood safety. This requires sufficient specific knowledge about blood transfusion, blood components and the side effects and must be able to manage situations in the cases of adverse reactions to transfusion. The mistakes that are made during the procedures will be minimized and the incidence of human errors will be reduced with broader and complete knowledge on transfusion medicine acquired during the years of the study.

The objective of the study

The objective of this study is to evaluate the knowledge obtained in the field of transfusion medicine at the Faculty of Nursing among the students who have completed the first level degree studies in nursing branches.

We also aimed to evaluate the efficiency of the present curricula during the bachelor program and to make suggestions to improve the program completing the necessary knowledge in transfusion medicine.

Material and methods

Our study was based on the evaluation of a questionnaire which was distributed without any prior announcement to 254 students of various master programs at the Faculty of Nursing. All the enrolled students were in the first year of the Master Degree and had not taken any additional knowledge in addition to those of the first degree studies program. Students were divided into two groups: first group consisted of 139 students enrolled in the second cycle of the Scientific Master Research (average marks above 8), of

which 75 students had no working experience and 61 students had working experience, only 27 of them had been or were employed in clinics that practiced blood transfusion.

The second group consisted of 118 students (average grade is not required after completion of bachelor studies) of which 91 were admitted directly from school and 27 were employed, 16 of them working in clinics that practice blood transfusion.

The questionnaire consisted of four sections. The first section of the questions concerned with general data about the groups, age, sex, state or private university where they had completed bachelor studies and working experience. The second section included questions on ethics and regulations on blood transfusion. The third and the fourth section included technical questions and questions on procedures on blood transfusion. The questionnaire presented two, three or four alternatives. Students were explained the way of completing the questionnaires. Correct answers were counted for each studied group. The comparison of the percentages of the correct answers between groups was made.

In order to assess the assimilation of knowledge in school we tried to classify the answers in very good assimilation of the subject when over 80% of responses were positive, satisfactory when 56% -80% of students answered positively and insufficient when replies were under 56%.

Binary logistic regression analysis was used to assess the differences between the two groups of nurses that is nurses with experience vs. nurses without experience. Odds ratios and their respective 95% confidence intervals (95% CIs), as well as p-values were calculated. In all the cases, a $P < 0.05$ was considered as statistically significant. Statistical Package for Social Sciences (SPSS) version 15.0 was used for all the statistical analyses.

Results and discussion

Analyzing the questionnaires resulted that the answers to the ethical-procedural questions were very good from both the groups of the study. No significant differences were found on the results between the groups

that have come has recently finished the bachelor studies and those with work experience. An exception to this was the group with working experience outside the clinics where only 35.29% of the interviewed gave a positive answer. The percentage of the positive responses to questions dealing with general data on blood group testing, has been from satisfactory to good, without significant differences between the studied groups. Regarding the responses to the other questions asked in the other sections in the field of immunotransfusiology and hemotransfusion the replies have been insufficient and in some of the questions poor (under 30% of questions had positive answers).

Our findings show the lack of knowledge in the field of transfusion medicine taken at the bachelor level. Such findings have been also reported from other authors in similar studies [10,11]. In a study conducted in Aquitaine France the authors have found that low training and transfusion activity, were key determinants of poor transfusion related-knowledge and practice [12].

The evaluation of the knowledge and the preparation of the students and practitioners through questionnaires is a practice that is widely used to obtain data on the situation and to direct efforts to improve the qualities [10,13].

The Faculty of Nursing is continuously improving and developing the curricula and it is necessary to assess the knowledge acquired during the bachelor studies. Our questionnaire was simple, assessing only some of the basic knowledge of the students in the field of transfusiology. Nursing is a highly-desired profession in Albania, because of employment opportunities in the Country and especially abroad. In the past, the education of the nurses was a four year high school program.

Only recently, nursing education is performed in University level, including all the professional and scientific levels. Actually the fulfillment of minimally bachelor studies is obligatory for the nurses. This situation has influenced the opening of several Nursing Faculties in Public and Private Universities in Tirana and Several Districts.

Some of the Private Faculties of Nursery have included the Transfusion Medicine in their bachelor program. We had not sufficient data to make a statistically valid comparison of the knowledge between the students coming from these Faculties and the students coming from public ones.

All this popularity of nursing education and the importance of patient care bring the spotlight also need to increase the quality of this education.

This specific situation, reflected with an increased demand for nursing studies, should alert for a proper education especially in the field of transfusion medicine.

Most of the procedures of hemo transfusion are performed from the nurse, without the physician surveillance, upon their own responsibility, which makes very important their education.

To perform safely, each professional depends not only on their own knowledge and skills, but also on the knowledge and the skills of the team and the overall effectiveness of the operating systems [12,14].

In the actual study program of the faculty of nursing, the knowledge concerning transfusiology is not treated as a separate discipline, or included in a specific module; they are dispersed in different disciplines such as Immunology, Ethics, Legislation, Surgery, Anesthesiology, Internal Diseases and Pediatrics. This results in distributing the subject without any educational propaedeutics logic and diminution of its importance. The recommendation Rec. [2004]18 of the Committee of Ministers to member state on teaching transfusion medicine to nurses [15], is adapted only in the Master Program as an obligatory discipline.

On the other hand, although credits are sufficient for practice, there is not any specific training program near the transfusion centers. We think that an appropriate practical training near these centers will reinforce their knowledge.

Our findings suggest that the knowledge in the field of transfusion medicine is insufficient among all the studied groups, independent from the results obtained in bachelor studies or the working experience.

Even the positive answers from the subjects of the groups having working experience in the structures where hemotransfusion is practiced were scored insufficient without significant differences with the other groups. This would suggest that probably they have not been involved in such procedures.

Conclusions and recommendations

Knowledge in transfusion medicine obtained in bachelor level in the Faculty of Nursing is insufficient.

Distribution of basic knowledge in various subjects makes the assimilation of the knowledge difficult and fruitless.

Introducing Transfusion Medicine as a specific subject in the first degree studies in the Faculty of Nursing is imperative

Professional practice program should include the development of a well directed stage near the transfusion centers and the clinics where hemotransfusion is practiced.

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