#### 101 - BLOOD TRANSFUSION IN ELDERLY HOSPITALIZED AT UNIVERSITY HOSPITAL IN NATAL

MAISA ARANTES DA SILVA; LÍVIA SEMELE CÂMARA BALDUÍNO; GABRIELA SOUSA MARTINS MELO; GILSON DE VASCONCELOS TORRES. Nursing Post- Graduate Program/UFRN - Natal/RN, Brazil maisa.arantes@uol.com.br

#### INTRODUCTION

In recent years, there has been a progressive and considerable concern about ensuring the safety of transfusion. This fact, triggered, primarily, by the aging of population, the rates of violence and accidents, in addition to technical and scientific advances in health causing an increase in demand for transfusions.

For Moreira (1998), the process of human aging is a worldwide phenomenon. In developed countries, this process occurred at a slow evolution of economic growth in the level of welfare and reducing social inequalities. However, in recent years, the aging started to gain greater importance in developing countries with rapidly increasing population of above sixty years in relation to the general population.

In this context, in Latin American countries are expected increases of up to 300% of the elderly population (TRUELSEN, BONITA, JAMROZIK, 2001). According to Veras (2003), at Brazil, the number of elderly rose from three million in 1960 to seven million in 1975 and fourteen million in 2002, an increase of 500% in forty years, and is estimated to reach thirty-two million in 2020.

But the biggest challenge in the twenty-first century will take care of this growing population of elderly, most with low socioeconomic and educational levels and a high prevalence of chronic and disabling diseases. Health systems have to cope with a growing demand for diagnostic and therapeutic procedures of non-transmissible chronic diseases, especially the cardiovascular and neurodegenerative disorders, and an even greater demand for services of physical and mental rehabilitation (MOREIRA, 1998; CARVALHO FILHO, GARCIA, 2003; VERAS, 2003).

In Brazil, the National Health Policy on Elderly has played a relevant role and its basic purpose is the promotion of healthy aging, the maintenance and improvement of the most of the functional capacity of the elderly in the prevention of diseases, the health recovery of who fall ill and the rehabilitation of those who will have restricted their functional capacity in order to assure their stay in the environment they live, performing their duties in an independent manner in society (BRAZIL, 1999).

Currently, few studies are available on the use of blood and its components among our elderly. However, the usual general health services such as main hospitals, emergency services, intensive care units, the several clinics ambulatories and basic health units have received a high demand of the elderly.

Although the vast majority of the elderly will lead to, at least, one chronic disease, not all are limited by these diseases, and many lead perfectly normal lives with their diseases controlled. However, with the growth of elderly population in Brazil, many of these require surgery and therapeutic treatments, which is increasing the demand for blood and its components.

With the increase in elderly population in the world, all processes related to aging need to be increasingly studied as well as the actions on the transfusion of blood products. So, this study aims to characterize the use of blood products by the elderly population of a university hospital.

### **METHODOLOGY**

It is a descriptive study with retrospective data and quantitative approach, conducted at Onofre Lopes University Hospital (HUOL), located in the city of Natal / RN, belonging to the Health Complex of the Federal University of Rio Grande do Norte - UFRN, characterized as a institution of university education and integrated to the network of Unified Health System (SUS), through the Organic Law 8080/90.

The population was composed of 773 requests for blood sent to the Hematology and Hemotherapy Nucleus of UFRN (NHH), the HUOL's agency transfusion in the period from 01 January 2008 to June 30, 2008. The inclusion criteria were requests for blood for patients admitted in HUOL aged less than 60 years. We excluded the requests with the age field blank. The data collection took place through a structured instrument that allowed gathering information about transfusions and other variables. With the signing of the terms agreement at HUOL General Board and Director of the NHH, with the assent of the Ethics Committee of the HUOL under the No. 198/08.

Data collection was performed in July 2008. The collected data were organized into electronic database in Microsoft Excel, analyzed the SPSS statistical program.

### **RESULTS AND DISCUSSION**

Of the total of 773 requests for blood in the period analyzed, the data revealed that 324 (41.9%) were for the elderly. In relation to the percentage of transfusions performed in the population studied, we have, distributed for months, 21% in January, 23.1% in February, 15.7% in March, 12% in April, 17.3% in May, 10.8% in June.

The predominance in our study of elderly male was 69.1%. As for sex, the data observed in our study are differentiated from other studies, which showed that most of the transfusion occurs in females (ANDERSON et al., 2007). In a study conducted in hospitals in Finland, at the national blood component database of 2002 and 2003, most of the blood was intended for the elderly, 51.6%, with more than 64 years of age (PALO, R et al., 2006). Regarding gender, the same study showed that 44.3% were male and 55.7% female.

We can see that, in our study, the majority (64.5%) of those surveyed have aged 70 or more years, which is similar to the study by Anderson et al. (2007), which showed that 85% of transfusions were aimed at elderly over 70 years. A study of blood transfusion in a hospital in Minnesota showed that the elderly constituted the majority corresponding to 54.3% of patients and, of these, 53.3% received red cell concentrate (VAMVAKAS, TASWELL, 1994). A random sample of hospitals in France also showed that the majority (57%) of transfusions in the population were in patients over 65 years (MATHOULIN-PÈLISSIER et al., 2000).

A study on the transfusion of blood products in hospitals in the north of England noted a rapid increase in demand for blood by people over 45 years. In fact, the study found that most units of blood (57.2%) were transfused in people over 65 years, concluding that the changes in the proportion of elderly result in a large increase in demand for blood products (WELLS et al,

2002).

Regarding the hospital sectors for internment, we observed that 37.7% are from the mixed sector, place intended for patients of the medical clinic, 31.8% for the ground sector, of the surgical clinic patients, 29.3% ICU, remembering that this sector receives both patients from the surgical and medical clinics. In a study conducted by Titlestad et al. (2001), in two university hospitals in Denmark, with data from 1997 and 1998, 43% of transfusions occurred at the medical clinic and 57% in the surgical clinic.

Regarding the type of transfusion, the data showed that 54.3% was of emergency followed by 25.9% preoperative and 19.1% of routine, and for the blood components, appeared the concentrated red cell, with percentage of 68.5%.

About the type of surgery, there is evidence that the urological (61.8%) are those who more make transfusions, followed by gastric (14.6%) general (13.5%) and cardiac (10.1%), pointing out that the data were collected in the elderly population, while in general population, transplants and heart surgeries require larger number of transfusions.

We can see that 60.8% of those surveyed are multitransfused, showing that despite the high number of transfusions performed in the elderly, they receive more than one transfusion, which may be related to chronic diseases.

#### CONCLUSION

Faced with the characterization of the use of blood products by the elderly population of university hospital, we identified that there is greater frequency in males, aged over 70 years; the medical clinic had more data and most of the elderly was multitransfused.

With this study, we observed that there is an increase in the use of blood products by the elderly population, which is due to the growing proportion of the population of elderly people is increasing substantially. However, they often require more hospital assistance for medical and / or surgical treatment, thus are more inclined to transfusion.

Considering that the world population is aging and chronic diseases are highly prevalent among the elderly, if our managers in health, whether public or private, do not seriously invest in actions to capitation of donor blood, we will not have blood components to meet the elderly population, once that the blood banks work with their stockpiles inadequate to meet the needs of the general population.

#### **REFERENCES**

BRASIL, Portaria do Gabinete do Ministro de Estado da Saúde de nº 1395, de 9 de dezembro de 1999, que aprova a Política Nacional de Saúde do Idoso e dá outras providências. Brasília: **Diário Oficial [da] República Federativa do Brasil**, nº 237-E, p. 20-24, 13 dez., seção 1,1999.

CARVALHO, J. A. M.; GARCIA; R. A. The aging process in the Brazilian population: a demographic approach. **Cad. Saúde Pública**, v. 19, p. 725-733, 2003.

MOREIRA, M. M. O envelhecimento da população brasileira em nível regional; 1940-2050. In: **Encontro Nacional de estudos populacionais**, XI. Anais. p. 3030-3124, Caxambu: Associação Brasileira de Estudos Populacionais, 1998. TRUELSEN, T.; BONITA, R.; JAMROZIK, K. Survillance of stroke: Aglobal perspective. **Int J Epidemiol**, n. 30, p. S11-S12, 2001.

VERAS, R. The quest for adequate health care for the elderly: literature review and the application of an instrument for early detection and prediction of diseases. **Cad. Saúde Pública**, n. 19, p. 705-715, 2003.

WELLS, A.W. et al. Where does blood go? Prospective observational study of red cell transfusion in north England. **BMJ**, n.325, p.803, 2002

VAMVAKAS, E.C.; TASWELL, H.F. Epidemiology of blood transfusion. Transfusion. v.34, p.464-470. 1994

MATHOULIN-PÈLISSIER S. et al. Blood transfusion in a random sample of hospitals in France. **Transfusion**. v.40,p.1140-6, 2000.

PALO, R et al. Development of permanent national register of blood component use utilizing electronic hospital information systems. **Vox Sanguinis** . v.91, p. 140147, 2006.

TITLESTAD, K. et al. Monitoring transfusion practices at two university hospitals. **Vox Sanguinis. v.** 80 , p.4047, 2001.

ANDERSOM.S.A et al..Blood use by inpatient elderly population in the United States. **Transfusion**. v. 47, p.582-592, April.2007.

Main Author: MAISA ARANTES DA SILVA. Rua Maxaranguape, 550 - Apto 1802 - Tirol Natal/RN - CEP: 59020-160. E-mail: maisa.arantes@uol.com.br

## BLOOD TRANSFUSION IN ELDERLY HOSPITALIZED AT UNIVERSITY HOSPITAL IN NATAL ABSTRACT

Introduction: The aging population has been the subject of attention in Brazil, once there is a significant increase in the number of elderly in the population. It is observed that along with this demographic transition, this population needs surgery and therapeutic treatments, which are increasing the demand for blood and its components. The study aims to characterize the use of blood products by the elderly population of a university hospital. **Methodology**: This was a retrospective and descriptive study with data held in HUOL / UFRN / Natal, from January to June 2008. **Result**: Of 773 requests for blood, 324 (41.9%) are intended for elderly, 35.5% of those aged 60 to 69 years and 64.4% with more than 70 years, 30.9% female and of 69.1% male. Regarding the sector, 37.7% happened in medical clinic, 31.8% in surgical clinic, and 29.3% in ICU. Regarding the type of transfusion, 54.3% were of urgency, the concentrate of red blood cells the most common, with 222 (68.5%), and 60.8% of those surveyed were multitransfused. **Conclusion**: This study found that there is an increase in the use of blood products by the elderly population in the university hospital, which is due to the growing proportion of elderly population.

Keywords: hospitalization, aged, blood transfusion.

### TRANSFUSION DE SANG DANS LES PERSONNES AGEES HOSPITALISEES A L'HOPITAL UNIVERSITAIRE DE NATAL

Introduction: Le vieillissement de la population a fait l'objet de l'attention au Brésil, une fois que vous êtes une augmentation significative du nombre de personnes âgées dans la population. Il est observé que le long de cette transition démographique, les besoins de la population de cette chirurgie et de traitements thérapeutiques, qui sont l'accroissement de la demande pour le sang et ses composants. L'étude vise à caractériser l'usage de produits sanguins par la population âgée d'un hôpital universitaire. Méthodologie: Il s'agit d'une étude descriptive rétrospective des données qui s'est tenue à HUOL / UFRN /

Natal, en Janvier et Juin 2008. Résultat: Un total à 773 demandes de sang, 324 (41,9%) sont destinés aux personnes âgées, 35,5% des personnes âgées de 60 à 69 ans et 64,4% avec plus de 70 ans, 30,9% des 69,1% des femmes et des hommes. En ce qui concerne l'industrie, 37,7% de médecine générale, de chirurgie clinique de 31,8%, 29,3% et de soins intensifs généraux. En ce qui concerne le type de transfusion, 54,3% ont été d'urgence, un concentré de globules rouges les plus communs 222 (68,5%) et 60,8% des personnes interrogées a été multitransfused. Conclusion: Cette étude a révélé que il ya une augmentation dans l'usage de produits sanguins par les personnes âgées dans la population de l'hôpital universitaire, qui est due à l'augmentation de la proportion de personnes âgées.

Mots-clés: hospitalization, les personnes âgées, la transfusion sanguine.

# TRANSFUSIÓN DE SANGRE EN ANCIANOS HOSPITALIZADOS EN EL HOSPITAL UNIVERSITARIO DE NATAL.

Introducción: El envejecimiento de la población ha sido objeto de atención en Brasil, una vez que eres un aumento significativo en el número de ancianos en la población. Se observa que junto con esta transición demográfica, las necesidades de la población esta cirugía y tratamientos terapéuticos, que están aumentando la demanda de sangre y sus componentes. El estudio apunta a caracterizar el uso de productos derivados de la sangre de la población anciana de un hospital universitario. Metodología: Este fue un estudio descriptivo retrospectivo con datos en poder HUOL / UFRN / Natal, en enero y junio de 2008. Resultados: Un total de 773 solicitudes de sangre, 324 (41,9%) están destinados a mayores, el 35,5% de las personas de 60 años a 69 años y el 64,4% con más de 70 años, el 30,9% de El 69,1% de hombres y mujeres. Con respecto a la industria, el 37,7% de medicina general, clínica quirúrgica 31,8%, 29,3% y en general la Unión de Tribunales Islámicos. En lo que respecta al tipo de transfusión, 54,3% fueron de urgencia, un concentrado de glóbulos rojos, los más comunes 222 (68,5%) y 60,8% de los encuestados multitransfused fue. Conclusión: Este estudio encontró que hay un aumento en el uso de productos derivados de la sangre de la población anciana en el hospital universitario, lo cual es debido a la creciente proporción de población de edad avanzada.

Palabras clave: hospitalización, anciano, transfusión sanguínea.

## TRANSFUSÕES DE SANGUE EM IDOSOS HOSPITALIZADOS NO HOSPITAL UNIVERSITÁRIO EM NATAL RESUMO

Introdução: O envelhecimento populacional vem sendo alvo de atenção no Brasil, uma vez que está ocorrendo um aumento significativo do número de idosos na população. Observa-se que juntamente com essa transição demográfica, esta população necessita de intervenções cirúrgicas e tratamentos terapêuticos, que vem aumentando a demanda por sangue e seus componentes. Assim, o estudo tem como objetivo caracterizar a utilização de componentes sangüíneos pela população idosa de um hospital universitário. **Metodologia**: Trata-se de um estudo descritivo com dados retrospectivo, realizado no HUOL/UFRN/ Natal, em janeiro a junho de 2008. **Resultado:** Do total de 773 solicitações de hemocomponentes, 324 (41,9%) são destinados para idosos, destes 35,5% com idade de 60 a 69 anos e 64,4% com mais de 70 anos, 30,9% do sexo feminino e 69,1% masculino. Com relação ao setor 37,7% clínica médica, 31,8% clínica cirúrgica, e 29,3% UTI geral. Quanto ao tipo de transfusão 54,3% foram de urgência, o concentrado de hemácia o mais freqüente 222 (68,5%) e 60,8% dos pesquisados era politransfundidos. **Conclusão**: Com este estudo observamos que existe um aumento na utilização de componentes sangüíneos pela população idosa no hospital universitário, fato este devido a crescente proporção da população de idosos.

Palavras-chaves: hospitalização, idoso, transfusão de sangue.