140 - CHARACTERIZATION OF THE INCIDENCE OF TRANSFUSION REACTIONS IN A UNIVERSITY HOSPITAL IN NATAL / RN

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INTRODUCTION

The blood components transfusion may be considered as the final act of a set of activities that is the blood bank process, but even done within the recommended standards, well indicated and properly administered, it involves sanitary risks, due to the use human origin products.

The transfusion process has a history of just over a century, being classically recognized as a starting point, the discovery and description of the ABO system by Landsteiner in 1900 (AMORIM CHILD, 2000; ZAGO; PASSETO; PASQUINE, 2001; BRASIL, 2004). Beneficial effects of blood transfusions have been observed since the beginning of the nineteenth century, a period which is assigned the completion of the first human blood transfusion (SERINOLLI, 1999; SANTOS; MORAES, 1992). However, the adverse reactions, including the transmission of diseases, have followed closely the use of this therapy (FERNANDES, 2001).

In recent decades, the safety of blood transfusions has been rigorously evaluated in many countries, since the procedure involves risk, with administrative, logistical and economic implications (RAO et al., 2002; CORWIN et al., 2004). Even with wise indications, approximately 20% of blood transfusions have some kind of adverse effect, with variable clinical strength. Among them, it is the transmission of viral infections (particularly HIV, hepatitis B and C), hemolytic reactions by incompatibility between blood groups, allergic reactions, bacterial contamination, acute lung diseases and fluid overload (VINCENT, et al., 2002).

The implantation of Standards Rules for Haemovigilance, beside meeting the requirements of Art 5 of the Federal Law No. 10205, 21/03/2001, promotes the operation of a agile system, able to effectively coordinate, process and analyze all the information reported, allowing the deployment of actions to correct and prevent transfusion reactions, in a opportune time (BRASIL, 2004).

Transfusion reactions are damages occurred during or after the blood transfusion, and related to it, which may be classified into immediate or delayed, according to the time elapsed between the transfusion and the occurrence of the incident (BRASIL, 2004).

The transfusion reactions can be complications related to bacterial contamination, acute hemolytic reactions (especially those occasioned by incompatibility of ABO system), pulmonary edema by fluid excess, etc. (CHAMONE; DORLHIAC - LLACER; NOVARETTI, 2001; ZAGO; PASSETO; PASQUINE , 2001; BRASIL, 2004).

In Brazil, it is not known the prevalence / incidence of actual transfusion reactions, whether related to therapy, resulting in bad indication and use of blood products or failures in the process in the blood cycle. It will only be possible to act on the prevention of transfusion reactions when they are identified, diagnosed, investigated, reported and analyzed in a systematic way.

It is necessary to know the types of transfusion reactions, the related blood components and their prevalence, to introduce corrective and preventive measures to reduce these risks (OLIVEIRA; COZAC, 2003). We need health teams that know the transfusion practice principles and are able to handle with the adverse transfusion reactions.

This article is intended to characterize the incidence of transfusion reactions through the analysis of the notification formularies of a university hospital in Natal / RN.

METHODOLOGY

Descriptive and retrospective study conducted at the Haemovigilance Sector of Onofre Lopes University Hospital (HUOL), located in Natal / RN, Brazil, with the use of data collected through 36 reports of transfusion reactions formularies, from January 2004 to December 2006.

The data-collection was performed in the month of July 2007, after approval by the risk management and by general direction of that hospital. The data were exported and analyzed on a descriptive way though Microsoft Excel software.

RESULTS

In HUOL, of total 17.545 blood transfusions held, were reported 36 transfusion reactions, with overall incidence of 0.21% in the period under consideration (2004/2006), being 13 in 2004 (0.23%), 11 in 2005 (0,19 %) and 12 in 2006 (0.20%), as Figure 1.

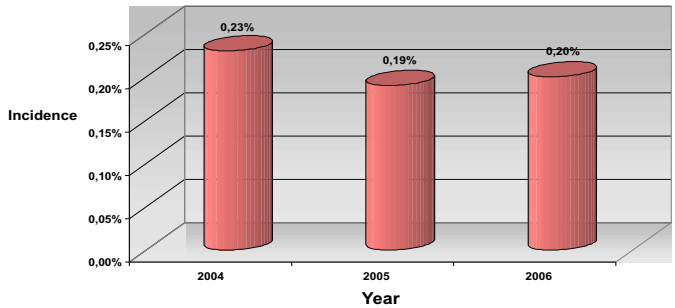

Figure 1 - Incidence of transfusion reactions in the Onofre Lopes University Hospital for the years 2004, 2005 and 2006.

It is estimated that 1 to 3% of blood transfusions lead to a transfusion reaction. This percentage rises to 10% in patients who were transfused several times. If we extend the concept of transfusion reaction for any complications arising from the transfusion, the proportion would be even higher, it is estimated that one in five transfusions induces some kind of

complication (AMORIM FILHO, 2000).

Taking into consideration only the blood components involved in the transfusion reactions, we can see in Figure 2 that the general incidences were 0.28% in the components of red blood cells concentrate (RBCH), 0.28% in fresh frozen plasma (FFP), 0,22% in the platelet concentrate (PC) and 0.08% in the reed blood cells concentrate poor in leukocytes (RBCCPL).

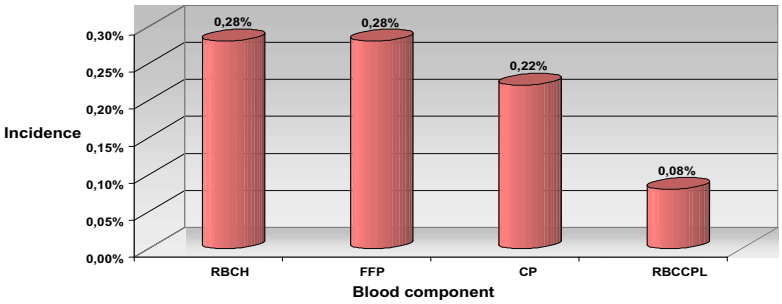

Figure 2 - General incidence of blood components involved in transfusion reactions in Onofre Lopes University Hospital, in the period of 2004 to 2006.

In non-hemolytic febrile reactions, the blood components involved in order of frequency are the platelets concentrates, red blood cells concentrates, as in the allergic reactions, the related blood components are the fresh plasmas and the red blood cells concentrate (KLEINMAN; CHAN; ROBILLARD, 2003). All blood components types are related to fluid overload, requiring an accurate observation in the infusion speed (ZAGO; PASSETO; PASQUINE, 2001).

As for the percentage of transfusion reactions types, the Figure 3 highlights non-hemolytic febrile reaction (52.7%), followed by an allergic reaction (41.6%) and fluid overload (5.5%).

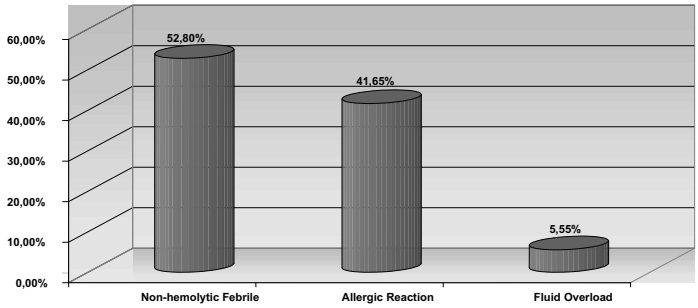

Figure 3 - Percentage of the types of transfusion reaction at Onofre Lopes University Hospital, in the period of 2004 to 2006.

The non-hemolytic febrile reaction is the most frequent, especially in those patients who were transfused in several opportunities, followed by allergic reactions, but their incidence is underestimated, once often go unnoticed (CHAMONE, 2002; AMORIM FILHO, 2000).

CONCLUSION

Compared with the general data obtained in the literature, it may be concluded that there is a probable low register of transfusion reactions. This phenomenon may be due to failures in the reaction detection by the nursing and / or doctor professional, or even to the habit of not triggering the notification process as a formal registration.

Adopting a protocol of actions to be followed, and the notification to the haemovigilance service of transfusion reactions is of fundamental importance, aiming at the implementation of measures that increase the transfusion safety. To the system get success and reach its goal, it is essential that the professionals responsible for transfusion actively participate in the notification process.

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CHARACTERIZATION OF THE IMPACT OF REACTION IN A HOSPITAL IN UNIVERSITÁRIO Natal / RN
ABSTRACT

Introduction: By using products from the transfusion of human blood involves health risk. It is necessary to know the types of transfusion reactions, the hemo-components related to them and their impact, to introduce corrective and preventive measures that reduce those risks. It is estimated that 1 to 3% of transfusions of blood lead to a reaction Transfusion of blood (AMORIM CHILD, 2000). Goal: Characterize the incidence of transfusion reactions through the analysis of the forms of notification of a university hospital in Natal / RN. Methodology: study done in the sector of hemo-vigilance of HUOL, in the period from 2004 to 2006, with the data sheet for notification of transfusion reactions. Results: A total of 17,545 hemo-transfusion were reported 36 reactions transfusion with overall incidence of 0.21%, and 13 in 2004 (0.23%), 11 in 2005 (0.19%) and 12 in 2006 (0, 20%). Taking into consideration only the hemo-components involved in the transfusion reactions, the effect of general were concentrated in the components of red blood cells (0.28%), plasma fresh frozen (0.28%), concentrated platelets (0.22%) and concentrate on RBCs poor in leukocytes (0.08%). The reaction febrile not hemolytic (52.7%), followed by an allergic reaction (41.6%) and overhead excess liquid in the blood (5.5%). Conclusion: Compared with the general data obtained in the literature can conclude that there are probably sub-notification of transfusion reactions. This phenomenon may be due to failures in the detection of the reaction of the professional nurse and / or doctor or even the habit of not trigger the notification process and formal registration.

KEYWORDS: Impact; Reaction Transfusion of blood; Hemo-component.

CARACTÉRISATION DE L'IMPACT DE LA RÉACTION DANS UN HÔPITAL DE L'UNIVERSITÉ DU NATAL / RN
RESUMÉ

Introduction: En utilisant les produits de la transfusion du sang humain implique risque pour la santé. Il est nécessaire de connaître les types de réactions de transfusion, les composants hemo - qui s'y rapportent et de leurs effets, d'introduire des mesures correctives et préventives qui permettent de réduire ces risques. On estime que 1 à 3% des transfusions de sang conduire à une réaction de transfusion de sang (AMORIM ENFANT, 2000). Objectif: Caractériser l'incidence de la transfusion réactions grâce à l'analyse des formulaires de notification d'un hôpital universitaire dans le Natal / RN. Méthodologie: étude réalisée dans le secteur de hemo - vigilance de HUOL, dans la période allant de 2004 à 2006, avec la fiche de notification des réactions de transfusion. Résultats: Un total de 17.545 hemo transfusion ont été signalés 36 réactions à la transfusion incidence globale de 0,21%, et 13 en 2004 (0,23%), 11 en 2005 (0,19%) et 12 en 2006 (0, 20%). Prenant en considération que le hemo - impliqués dans la transfusion de réactions, l'effet général ont été concentrées dans les composantes de globules rouges (0,28%), le plasma frais congelé (0,28%), concentré de plaquettes (0,22 %) Et de se concentrer sur hématies pauvres en leucocytes (0,08%). La réaction fébrile non hémolytique (52,7%), suivie par une réaction allergique (41,6%) et les frais généraux excès de liquide dans le sang (5,5%). Conclusion: En comparaison avec les données générales obtenues dans la littérature peut conclure qu'il ya probablement sous- notification de la transfusion réactions. Ce phénomène peut être dû à des défaillances dans la détection de la réaction de la profession infirmière et / ou le médecin ou encore l'habitude de ne pas déclencher le processus de notification et d'enregistrement officiel.

MOTS CLES: Impact; Réaction de transfusion de sang; Hemo composants.

CARACTERIZACIÓN DE LOS EFECTOS DE LA REACCIÓN EN UN HOSPITAL DE UNIVERSIDAD NATAL / RN
RESUMEN

Introducción: El uso de los productos de la transfusión de la sangre humana implica riesgo para la salud. Es necesario conocer los tipos de reacciones a la transfusión, el hemo componentes relacionados con los mismos y su impacto, para introducir medidas correctivas y preventivas que reduzcan los riesgos. Se estima que 1 a 3% de las transfusiones de sangre dar lugar a una reacción de la transfusión de sangre (AMORIM NIÑO, 2000). Objetivo: Caracterizar la incidencia de reacciones a la transfusión a través del análisis de las formas de notificación de un hospital universitario en Natal / RN. Metodología: estudio realizado en el sector de hemo vigilancia de HUOL, en el período de 2004 a 2006, con la ficha de datos para la notificación de reacciones a la transfusión. Resultados: Un total de 17.545 hemo transfusión se notificaron 36 reacciones de transfusión con incidencia global de 0,21%, y 13 en 2004 (0,23%), 11 en 2005 (0,19%) y 12 en 2006 (0, 20%). Teniendo en cuenta sólo la hemo componentes que participan en la reacciones a la transfusión, el efecto general se concentran en los componentes de los glóbulos rojos (0,28%), de plasma fresco congelado (0,28%), concentrado de plaquetas (0,22 %) Y concentrarse en glóbulos rojos pobres en leucocitos (0,08%). La reacción febril no hemolítica (52,7%), seguida de una reacción alérgica (41,6%) y gastos generales exceso de líquido en la sangre (5,5%). Conclusión: En comparación con los datos generales obtenidos en la literatura puede llegar a la conclusión de que hay probablemente en- notificación de las reacciones a la transfusión. Este fenómeno puede deberse a fallos en la detección de la reacción de la enfermera profesional y / o médico o incluso la costumbre de no poner en marcha el proceso de notificación y el registro formal.

PALABRAS CLAVE: Impact; Reacción de Transfusión de sangre; Hemo componente.

CARACTERIZAÇÃO DA INCIDÊNCIA DE REAÇÕES TRANSFUSIONAIS EM UM HOSPITAL UNIVERSITÁRIO EM NATAL/RN
RESUMO

Introdução: Por utilizar produtos de origem humana a transfusão de sangue envolve risco sanitário. É necessário conhecer os tipos de reações transfusionais, os hemocomponentes relacionados às mesmas e sua incidência, visando a introdução de medidas preventivas e corretivas que reduzam esses riscos. Estima-se que de 1 a 3% das transfusões de sangue dão origem a uma reação transfusional (AMORIM FILHO, 2000). Objetivo: Caracterizar a incidência de reações transfusionais através das análises das fichas de notificação de um hospital universitário em Natal/RN. Metodologia: Estudo descritivo realizado no setor de hemovigilância do HUOL, no período de 2004 a 2006, com dados da ficha de notificação de reações transfusionais. Resultados: Do total de 17.545 hemotransfusão foram notificados 36 reações transfusionais com incidência geral de 0,21%, sendo 13 em 2004 (0,23%), 11 em 2005 (0,19%) e 12 em 2006 (0,20%). Levando em consideração apenas os hemocomponentes envolvidos nas reações transfusionais, as incidências gerais foram nos componentes de concentrado de hemácias (0,28%), plasma fresco congelado (0,28%), concentrado de plaquetas (0,22%) e concentrado de hemácias pobre em leucócitos (0,08%). A reação febril não hemolítica (52,7%), seguida pela reação alérgica (41,6%) e da sobrecarga volêmica (5,5%). Conclusão: Comparado com dados gerais obtidos na literatura pode-se concluir que há provavelmente subnotificação das reações transfusionais. Este fenômeno pode se dever a falhas na detecção da reação pelo profissional de enfermagem e/ou médico ou mesmo ao hábito de não desencadear o processo de notificação como registro formal.

PALAVRAS CHAVES: Incidência; reação transfusional; hemocomponente.