

## 135 - SIGNS AND SYMPTOMS RELATED TO TRANSFUSION REACTION IN A UNIVERSITY HOSPITAL IN NATAL / RN / BRAZIL

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### INTRODUCTION

In the context of activities related to health vigilance, the haemovigilance represents one of the strategic areas that aim directing actions to improve safety in blood transfusions. It is understood that transfusion reactions are composed by a set of signs and symptoms occurred during or after the blood transfusion and attributed to it (BRASIL, 2004).

The transfusion practice permeates the different stages in patients treatment, however, even being a common and frequent therapeutic procedure, the transfusion of blood products require special care to reduce the risks, since some of them can be lethal.

In monitoring therapy transfusion, the role of nursing professionals gets highlighted, because they remain closely to patients at all stages of a blood transfusion (MONTES; Barros and Barros, 2002).

The role of nursing is crucial in knowing how to identify the signs and symptoms of a reaction that often passes unnoticed, as well as provide assistance according to the symptoms that the patient presents (CHAMONE, 2001).

Because of the high frequency of transfusion that patients are submitted, it is very important to know the main risks and the proper diagnosis of complications secondary to the transfusion therapy, because recognizing the symptoms signs of a reaction may prevent irreversible complications, such as death (BRASIL, 2004).

It is not always easy to identify a transfusion reaction, often the signs and symptoms are so mild that go unnoticed, it is for no other reason that its incidence is very underestimated (AMORIM FILHO, 2000). It is very important to have a health staff trained to detect early transfusion reaction to immediately take appropriate measures.

**Table 1 - Types of acute transfusion reactions and the signs and symptoms related.**

Transfusion Reactions	Signs and Symptoms
Acute hemolytic reaction	Fever, chills, backache, nausea, vomiting, tachydyspnea, hypotension, hemoglobinuria.
Non-hemolytic febrile reaction	Fever (increase equal to or greater than 1°C in body temperature ), tremors, chills , facial rubbish.
Allergic Reaction	Hives, itchy skin , larynx edema (hoarseness, difficulty breathing ), bronchospasm (wheezing, dyspnea, cyanosis, retrosternal pain, and anxiety), digestives (nausea, vomiting, abdominal pain and diarrhea).
Acute lung injury (TRALI)	Tachydyspnea, hypoxia, fever, tachycardia, hypotension, non-productive cough, cyanosis.
Circulatory overload	Dyspnea, cyanosis, productive cough , tachycardia, arterial hypotension , peripheral edema, bubbling lung stertors.

Source: Manual of Haemovigilance / ANVISA (BRASIL, 2004)

### OBJECTIVE

Identify the signs and symptoms related to transfusion reactions reported by the nursing staff to the Haemovigilance Sector of the Onofre Lopes University Hospital, located in Natal / RN, Brazil.

### 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 48 notification formularies of transfusion reactions, from January 2004 to December 2006. The haemovigilance sector received 48 notification formularies of transfusion reactions of a total of 17545 blood transfusions. After investigation and analysis of the signs and symptoms reported, were confirmed 36 reactions, classified according to severity in Grade I and Grade III.

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

After investigation and analysis of the signs and symptoms reported, were confirmed 36 reactions transfusion classified according to the severity and we characterize 88.8% as Degree I - No immediate risk for life and 11.2% as Degree III - Immediate risk for life.

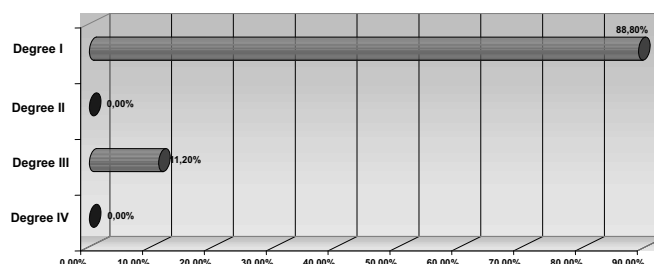


Figure 1. Characterization distribution of the dimension that the incident resulted to the patient, according to severity

degree

The transfusion reactions may be classified according to severity, being characterized as: Degree I - no immediate, or long term, risk for life; Degree II - morbidity in long term; Degree III - immediate risk for life, and Degree IV - death (BRASIL, 2004).

With the descriptions of signs and symptoms contained in notification formularies and investigation of transfusion reactions, we may grouping them according to the frequency shown in Figure 2, recalling that the formularies have one or more signs and symptoms described: 35.42% chills; 25% fever; 18% hives; 10.42% erythema; 6,25% dyspnea and edema; 4.17% hypertension, headache and chest pain; 2,08% cough, vomiting and backache.

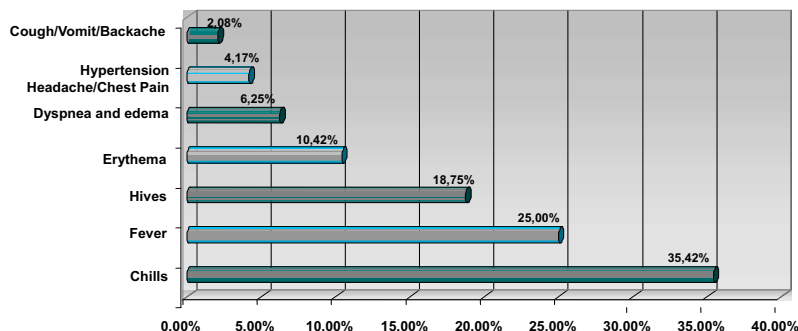


Figure 2. Signs and symptoms related to transfusion reactions in a University Hospital in Natal/RN, in the period from 2004 to 2006.

### CONCLUSION

The signs and symptoms more reported in notifications match those seen in the literature. This study has the failures of a retrospective report and it is known that the picture of transfusion reactions can range from mild and go unnoticed or even serious and take the patient immediately to death. Moreover, it is important to have a staff trained to early detect the reaction and so contribute to a reliable statistic and be able to quickly institute appropriate measures.

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### SIGNS AND SYMPTOMS RELATED TO TRANSFUSION REACTION IN A UNIVERSITY HOSPITAL IN NATAL / RN

/ BRAZIL

#### ABSTRACT

In the context of activities related to health vigilance, the haemovigilance represents one of the strategic areas that aim directing actions to improve safety in blood transfusions. It is understood that transfusion reactions are composed by a set of signs and symptoms occurred during or after the blood transfusion and attributed to it. Because of the high frequency of transfusion that patients are submitted, it is very important to know the main risks and the proper diagnosis of complications secondary to the transfusion therapy. Recognizing the symptoms signs of a reaction may prevent irreversible complications, such as death. This study aims to identify the signs and symptoms related to transfusion reactions reported by the nursing staff. Descriptive study developed at the Haemovigilance Sector of the Onofre Lopes University Hospital, in the period from 2004 to 2006, with the data from the notification reports of transfusion reactions. The haemovigilance sector received 48 notification formularies of transfusion reactions of a total of 17545 blood transfusions. After investigation and analysis of the signs and symptoms reported, were confirmed 36 reactions, classified according to severity in Degree I - No immediate risk for life (88.8%) and Degree III - Immediate risk for life (11.2%). The more reported signs and symptoms were: Chills (35.42%); Fever (25%); Hives (18.75%); Erythema (10.42%); Dyspnea and edema (6,25%); Hypertension, headache and chest pain (4.17%); cough, vomiting and backache, (2,08%). The signs and symptoms more reported in notifications match those seen in the literature. This study has the failures of a retrospective report and it is known that the picture of transfusion reactions can range from mild and go unnoticed or even serious and take the patient immediately to death. Moreover, it is important to have a staff trained to early detect the reaction and so contribute to a reliable statistic and be able to quickly institute appropriate measures.

KEYWORDS: Signs and symptoms, Transfusion reaction, Hospital.

### LES SIGNAUX ET LES SYMPTOMES LIES A LA REACTION DE LA TRANSFUSION SANGUINE DANS UN HOPITAL UNIVERSITAIRE DANS LE NATAL / RN / BRÉSIL

#### RÉSUMÉ

Dans le cadre des activités liées à la surveillance de la santé, de la vigilance hemo - représente l'un des domaines stratégiques dans le but d'une action directe pour améliorer la sécurité des transfusions sanguines. Il est entendu de réactions transfusionnelles par le nombre de signes et symptômes survenus pendant ou après la transfusion de sang et elle a affecté. En raison de la fréquence élevée de la transfusion des patients qui sont présentés, il est d'une importance fondamentale de connaissance des principaux risques et le bon diagnostic, les complications découlant de la thérapie pour la transfusion sanguine. Reconnaître les signes de symptômes d'une réaction peuvent prévenir les complications irréversibles tels que la mort. Cette étude but d'identifier les signes et les symptômes liés à la transfusion réactions signalés par l'équipe de soins infirmiers.

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. Le service de vigilance - hemo reçu 48 rapports de la transfusion réactions d'un total de 17.545 hemo - les transfusions. Après enquête et analyse des signes et des symptômes signalés ont été confirmés 36 réactions, classées en fonction de la gravité de Grade I - Absence d'une vie en danger retard (88,8%) et de catégorie III - Risques de la vie immédiatement (11,2%) . Les signes et les symptômes signalés étaient plus froids (35,42%); La fièvre (25%); Ruches (18,75%); Érythème (10,42%); Dyspnée et de l'œdème (6,25%); L'hypertension, les maux de tête Et des douleurs thoraciques (4,17%); Toux, vomissements et douleurs dorsales, (2,08%). Les signes et les symptômes signalés dans plusieurs notifications correspondent à celles observées dans la littérature. Cette étude est la défaillance d'une rétrospective rapport et l'on sait que l'image de la réaction de la transfusion sanguine peut varier d'une légère et passent inaperçus ou même sérieux et de prendre le patient immédiatement à mort. Il est donc important de disposer de personnel formé à la détection précoce de la réaction et de contribuer ainsi à une statistique fiable et être en mesure de mettre en place rapidement les mesures appropriées.

MOTS CLES: signes et symptômes, Réaction de la transfusion sanguine, l'hôpital.

#### **SEÑALES Y SÍNTOMAS RELACIONADOS CON LAS REACCIONES TRANSFUSIONAIS EN UN HOSPITAL DE LA UNIVERSIDAD EN NATAL/RN/BRASIL**

##### **RESUMEN**

En el contexto de las actividades relacionadas con la vigilancia en salud, hemovigilancia representa una de las áreas estratégicas, con el objetivo de la acción directa para mejorar la seguridad en las transfusiones de sangre. Se entiende reacciones a la transfusión por el número de señales y síntomas se produjeron durante o después de la transfusión de sangre y ella asignados. Debido a la alta frecuencia de la transfusión de los pacientes que se presentan, es de fundamental importancia el conocimiento de los principales riesgos y el correcto diagnóstico de las complicaciones derivadas de la terapia de transfusión de sangre. Reconocer los signos de los síntomas de una reacción puede evitar complicaciones irreversibles, como la muerte. Este estudio objetivó identificar los signos y síntomas relacionados con la transfusión de reacciones comunicadas por el equipo de enfermería. El estudio realizado en el sector de hemovigilancia de HUOL, en el período de 2004 hasta 2006, con la ficha de datos para la notificación de reacciones a la transfusión. El servicio de hemovigilancia recibió 48 informes de reacciones a la transfusión, de un total de 17.545 transfusiones sanguíneas. Después de la investigación y el análisis de los señales y síntomas informados fueron confirmados 36 reacciones, clasificados en función de la gravedad de grado I - Ausencia de un riesgo para la vida demora (88,8%) y de grado III - Riesgo de la vida de inmediato (11,2%) . Los señales y síntomas informados fueron más escalofríos (35,42%); Fiebre (25%); Hives (18,75%); Eritema (10,42%); Disnea y el edema (6,25%); Hipertensión, dolor de cabeza Y dolor en el pecho (4,17%); Tos, vómitos y dolor de espalda, (2,08%). Los signos y síntomas comunicados en las notificaciones coinciden con los más visto en la literatura. Este estudio es el fracaso de un informe retrospectivo y se sabe que la foto de la reacción de la transfusión de sangre pueden variar desde leves y pasan inadvertidos o incluso graves y tomar el paciente a la muerte de inmediato. Por lo tanto, es importante contar con personal capacitado para la detección temprana y la reacción a fin de contribuir a una estadística fiable y estar en condiciones de iniciar las medidas oportunas rápidamente.

PALABRAS CLAVE: Señales y síntomas de reacción de la transfusión de sangre, Hospital.

#### **SINAIS E SINTOMAS RELACIONADOS ÀS REAÇÕES TRANSFUSIONAIS EM UM HOSPITAL UNIVERSITÁRIO EM NATAL/RN/BRASIL**

##### **RESUMO**

Em contexto das atividades relacionadas à vigilância em saúde, a hemovigilância representa uma das áreas estratégicas com o objetivo de direcionar ações para aumentar a segurança nas transfusões sanguíneas. Entende-se por reações transfusionais o conjunto de sinais e sintomas ocorridos durante ou após a transfusão sanguínea e a ela atribuído. Em virtude da elevada frequência de transfusões a que pacientes são submetidos, é de fundamental importância o conhecimento dos principais riscos e o diagnóstico adequado das complicações decorrentes da terapia transfusional. Reconhecer os sinais de sintomas de uma reação pode prevenir complicações irreversíveis como o óbito. Este estudo objetivou identificar os sinais e sintomas relacionados às reações transfusionais notificados pela equipe de enfermagem. Estudo descritivo realizado no setor de hemovigilância do HUOL, no período de 2004 a 2006, com dados da ficha de notificação de reações transfusionais. O serviço de hemovigilância recebeu 48 notificações de reações transfusionais de um total de 17.545 hemotransfusões. Após investigação e análise dos sinais e sintomas relatados, foram confirmadas 36 reações, classificados de acordo a gravidade em Grau I - Ausência de risco de vida imediato (88,8%) e Grau III - Risco de vida imediato (11,2%). Os sinais e sintomas mais relatados foram calafrios (35,42%); febre (25%); urticária (18,75%); eritema (10,42%); dispnéia e edema (6,25%); hipertensão, cefaléia e dor no peito (4,17%); tosse, vômito e dor lombar, (2,08%). Os sinais e sintomas mais relatados nas notificações condizem com aqueles observados na literatura. Este estudo tem as falhas de um relato retrospectivo e sabe-se que o quadro da reação transfusional pode variar de leve e passar despercebido ou mesmo gravíssimo e levar o paciente à morte imediata. Por isso é importante ter equipe treinada para detectar precocemente a reação e assim contribuir para uma estatística confiável bem como ser capaz de instituir medidas apropriadas rapidamente.

PALAVRAS CHAVES: Sinais e sintomas, Reação transfusional, Hospital.