

# Blood Was Drawn From Another Stroke Patient, Which Resulted In A Pre-Analytical Laboratory Error In The Stroke Patient: A Case Report.

Septimiu Bucurescu

Neurology at Klinikum  
Ansbach, Escherichstr. 191522 Ansbach, Germany.

## Corresponding author:

Septimiu Bucurescu, Neurology at Klinikum  
Ansbach, Escherichstr. 191522 Ansbach, Germany.

**Received Date:** December 01, 2022

**Accepted Date:** December 19, 2022

**Published Date:** January 03, 2023

## Abstract

In this study, we describe a pre-analytical laboratory error that occurred in a stroke patient as a result of blood collection from a different stroke patient of the same gender. We also go through ways to prevent pre-analytical laboratory errors as well as their possible causes. The risk of making poor medical judgments that could harm a patient's health is eliminated when pre-analytical laboratory errors are correctly managed to avoid post-analytical laboratory errors.

## Keywords

Pre-analytical laboratory error; Stroke patient; Patient identification wristband; Patient identification sticker.

## Introduction

Laboratory errors are divided into three categories: pre-analytical, analytical, and post-analytical, depending on when they occurred during the laboratory working process. Pre-analytical errors are faults that happen during the collecting and transportation of biological samples, before such samples arrive at the lab. Analytical errors are mistakes that happen in the lab when processing materials and creating data. Post-analytical errors are errors that happen when medical choices are made using incorrect interpretations and applications of test results. Pre-analytical mistakes account for 61.9% of laboratory errors, followed by post-analytical errors (23.1%), and analytical errors (15%) [1].

Following hemolyzed, inadequate, inaccurate, and clotted samples as the most frequent causes of pre-analytical laboratory blood test errors, improper identification is regarded as the fifth most frequent reason [2]. Even if the introduction of the patient identity wristband and the patient identification sticker has improved patient identification and sample identification, inaccurate identification can still happen [3].

Since many early neurological rehabilitation patients are unable to cooperate due to speech difficulties, confused consciousness, and impaired memory, accurate patient identification by medical workers is crucial. For instance, 49% of stroke patients experience speech problems and 19% experience awareness haze [4], and 40.2% of traumatic brain injury patients experience memory problems [5].

Patients undergoing neurological rehabilitation frequently require laboratory testing because they frequently experience problems, including infections [6]. Stroke patients had a 30% total infection rate, 10% pneumonia rate, 10% uTI rate, and the remaining 80% are nosocomial infections of unknown origin [7]. Pneumonia occurs at a rate of 47% in patients with traumatic brain injury, and surgical site infections occur at a rate of 17% [8]. In neurological rehabilitation patients, early detection and treatment of infections shorten hospital stays, which lowers health-care expenditures and lowers infection-related mortality [9].

## Patient History

A 71-year-old patient with bleeding left anterior cerebral artery Our early rehabilitation section handled a stroke patient. During hospitalised, we got the results of the lab tests, but there was no blood was gathered, but no laboratory analysis was required. the leucocyte values Neutrophyles 88% (80), 13.5 10/3 ul (10.0 10/3), C-reactive Procalcitonin 4.49 ng/ml (0.5) and protein 13.33 mg/dl (0.5) were reduced and 6.4% (or more) less lymphocytes were present. because the Patient had no overt evidence of illness, therefore we took no action other than to a lab examination the next day. Leucocyte values were 9.4 10/3 ul and Neutrophils, procalcitonin, and C-reactive protein 0.35 were normal. lymphocytes weren't examined. A departmental internal investigation led us to the conclusion that the Blood was donated by a 75-year-old patient of the same gender.

with proper Due to a nosocomial infection, a patient with a middle cerebral artery ischemic stroke with a similar family name was sent the same day to the intensive care unit. The results of a laboratory test performed in the intensive care unit matched those given to the 71-year-old patient who had a hemorrhagic stroke in the left anterior cerebral artery.

## Discussions

When the correct patient's blood is drawn but the tubes are labelled with patient identification stickers from another patient with the same or a similar family name ("wrong stickers"), a laboratory error has occurred. Before or after the blood collection process, tubes can be labelled. However, if blood is drawn from a patient with the same or a similar family name, laboratory errors will arise ("wrong patient"). Tubes can also be

# Clinical Neurology And Neurosurgery Research

branded before collection with patient identification stickers belonging to the proper patient.

Patients with the same family name should, if at all feasible, be treated in different units, and nurses and doctors should double-check stickers to prevent tubes from being labelled with the “wrong stickers” The family name, given name, and date are used to prevent blood from being drawn from “the wrong patient.

## Conclusions

Errors in the pre-analytical laboratory can result from incorrect patient identification and/or tube labelling. preventing pre-analytical bias

Correct patient identification and tube labelling can easily reduce laboratory errors. The risk of making poor medical judgments based on post-analytical laboratory errors that could harm patients is eliminated when using an open approach to error management, which involves noting the problem and redoing the laboratory test.

## References

1. Carraro P, Plebani M (2007) Errors in a stat laboratory: types and frequencies 10 years later. *Clin Chem* 53: 1338-1342.
2. Bonini P, Plebani M, Ceriotti F, Rubboli F (2002) Errors in laboratory medicine. *Clin Chem* 48: 691-698.
3. Renner SW, Howanitz PJ, Bachner P (1993) Wristband identification error reporting in 712 hospitals. A College of American Pathologists' Q-Probes study of quality issues in transfusion practice. *Arch Pathol Lab Med* 117: 573-577.
4. Jerntorp P, Berglund G (1992) Stroke registry in Malmö, Sweden. *Stroke* 23: 357-361.
5. Corrigan JD, Whiteneck G, Mellick D (2004) Perceived needs following traumatic brain injury. *J Head Trauma Rehabil* 19: 205-216.
16. Brown JM, Deriso DM, Tansey KE (2012) From contemporary rehabilitation to restorative neurology. *Clin Neurol Neurosurg* 114: 471-474.
7. Westendorp WF, Nederkoorn PJ, Vermeij JD, Dijkgraaf MG, van de Beek D (2011) Post-stroke infection: a systematic review and meta-analysis. *BMC Neurol* 11: 110.
8. Kourbeti IS, Vakis AF, Papadakis JA, Karabetsos DA, Bertias G, et al. (2012) Infections in traumatic brain injury patients. *Clin Microbiol Infect* 18: 359-364.
9. Johnsen SP, Svendsen ML, Ingeman A (2012) Infection in patients with acute stroke. *The Open Infectious Diseases Journal* 6: 40-45