Perm State Medical University

THE HISTORY OF BLOOD TRANSFUSIONS

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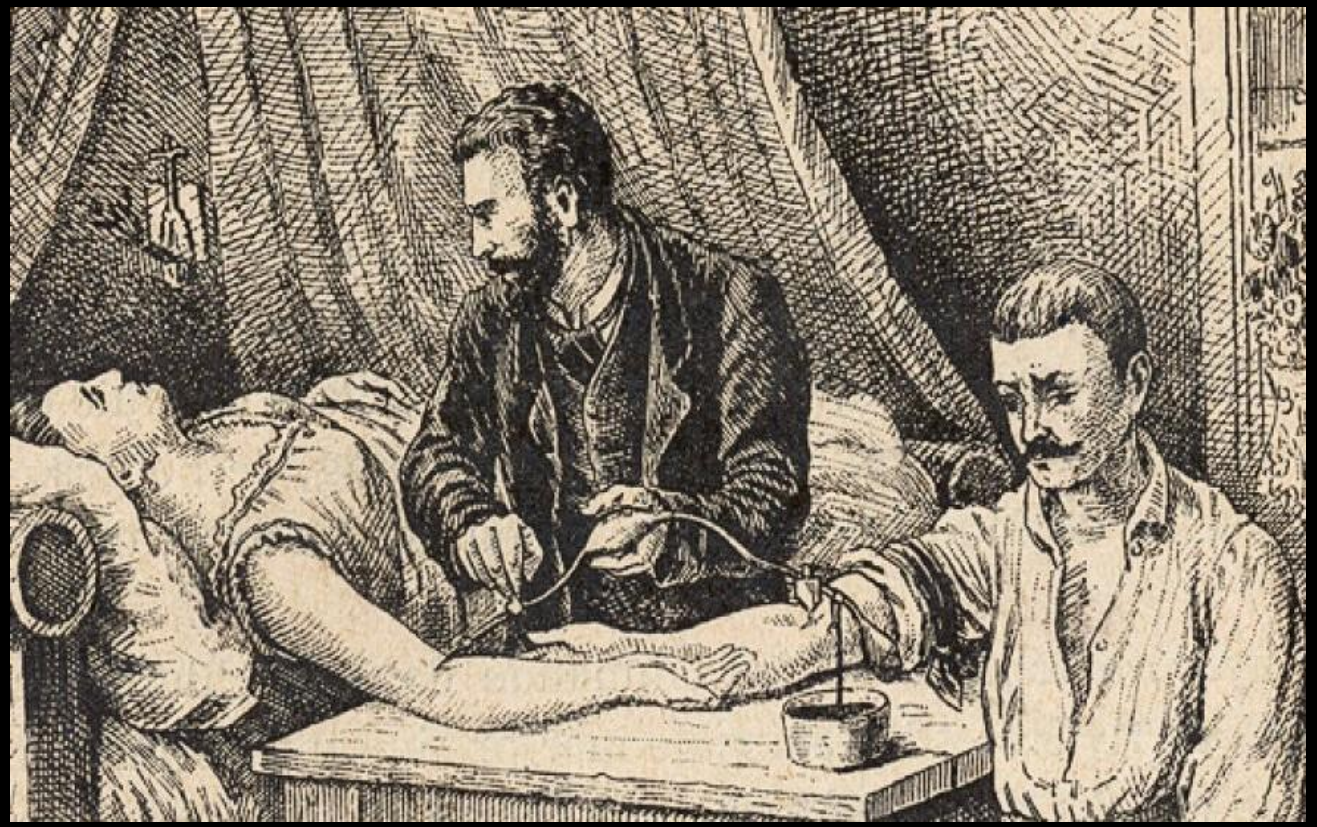


THE HISTORY OF BLOOD TRANSFUSIONS

The history of blood transfusions goes back centuries. People have long appreciated the importance of blood for the life of the body, and the first thoughts about the use of blood for medicinal purposes appeared long before our era. Significant blood loss was the cause of death. All this contributed to the idea of moving blood from one body to another.

There are 3 stages in the history of blood transfusion:

1) EMPIRICAL PERIOD

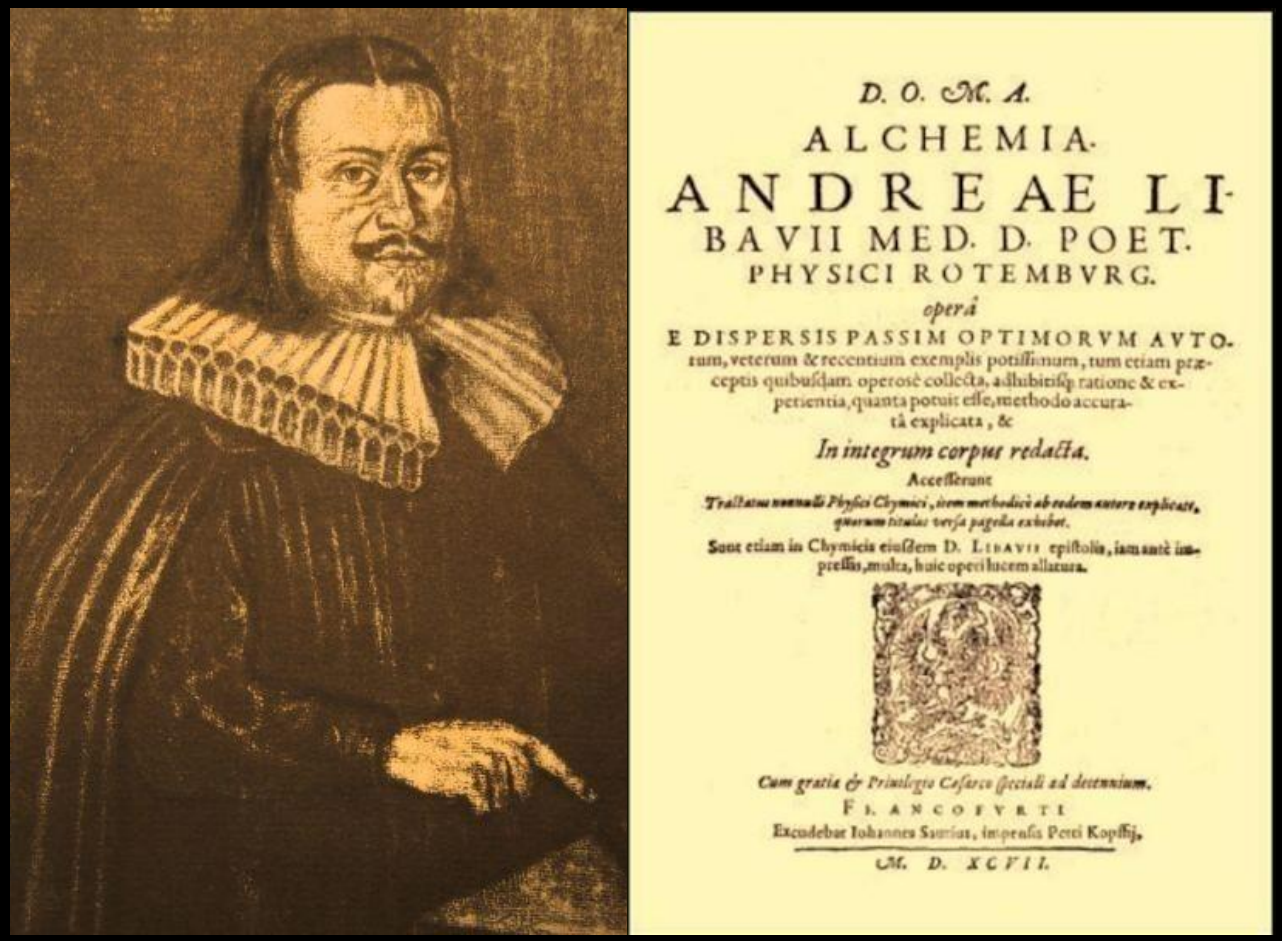
2) ANATOMICAL AND PHYSIOLOGICAL PERIOD

3) THE SCIENTIFIC PERIOD

EMPIRICAL PERIOD

The empirical period in the history of blood transfusions was the longest in duration and the most useless for medicine.

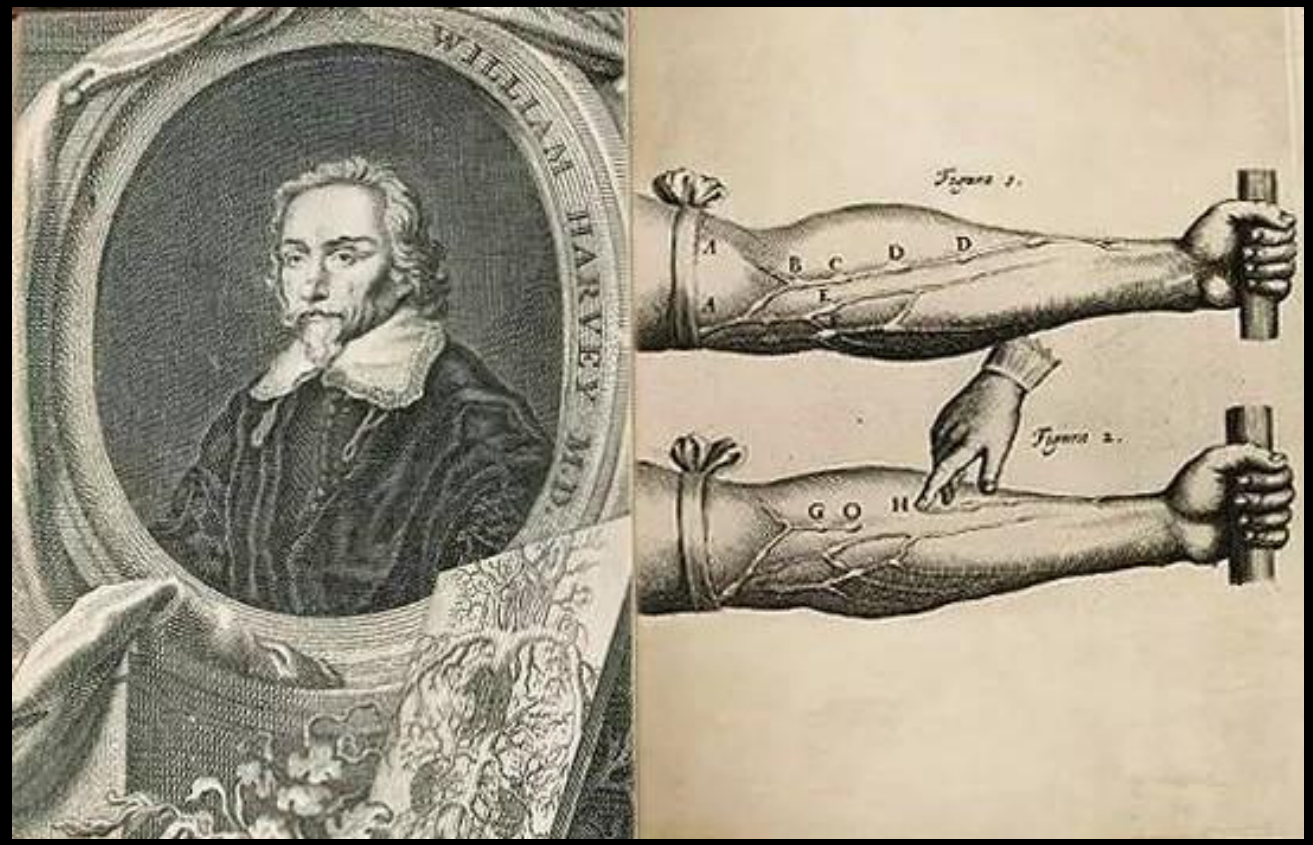
The first mention of blood transfusion is in Libavius ' writings, published in 1615, where he describes the procedure of blood transfusion from person to person by connecting their vessels with silver tubes, but there is no evidence that such a blood transfusion was made to anyone.


D. O. M. A.
ALCHEMIA
ANDREAE LI-
BAVII MED. D. POET.
PHYSICI ROTEMBVRG.
operâ
E DISPERSIS PASSIM OPTIMORVM AVTO-
tum, veterum & recentium exemplis potissimum, tum etiam præ-
ceptis quibusdam operosè collecta, adhibitisq; ratione & ex-
perientia, quanta potuit esse, methodo accura-
tâ explicata, &
In integrum corpus redacta.
Accesserunt
Tractatus nouenarii Physici Chymici, item methodici ab eodem autore explicati,
quorum titulos versa pagella exhibet.
Sunt etiam in Chymicis eiusdem D. LIBAVII epistolæ, iam antè im-
pressæ, multa, huic operi lucem allaturæ.
Cum gratia & Priuilegio Cæsareo speciali ad decennium.
FRANCOFVRTI
Excudebat Iohannes Saurius, impensis Petri Kopffij.
M. D. XCVII.

Andreas Libavius (ca. 1555-1616)

ANATOMICAL AND PHYSIOLOGICAL PERIOD

The discovery of the laws of blood circulation by William Harvey in 1628. Since then, due to a correct understanding of the principles of blood movement in a living organism, the infusion of medicinal solutions and blood transfusion has received an anatomical and physiological justification.



William Harvey (1578-1657)

ANATOMICAL AND PHYSIOLOGICAL PERIOD

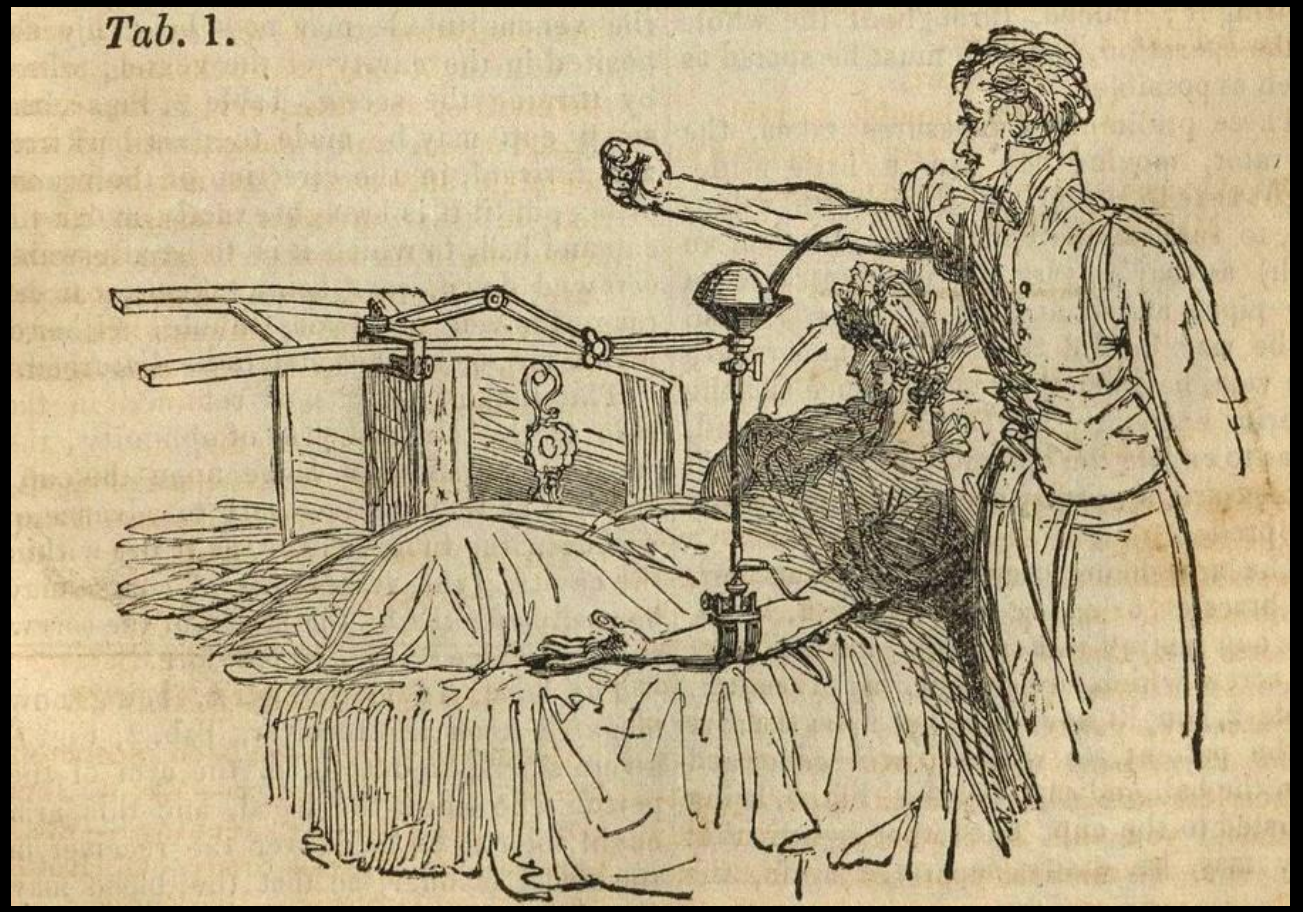
In 1666, the outstanding English anatomist and physiologist R. Lower successfully transfused blood from one dog to another using silver tubes, which was the impetus for the use of this manipulation in humans.

ANATOMICAL AND PHYSIOLOGICAL PERIOD

The first transfusion of blood from an animal to a human was performed in 1667 in France by J. Deni. He transfused blood from a lamb to a mentally ill young man who died from repeated bloodletting, and the boy recovered.

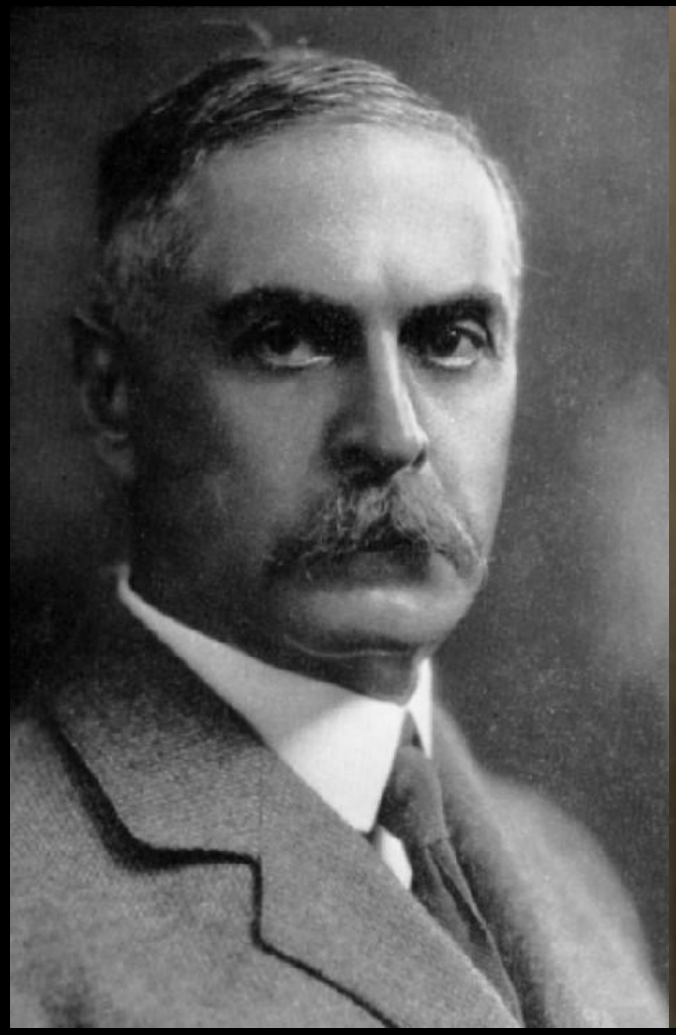
ANATOMICAL AND PHYSIOLOGICAL PERIOD

However, there were accidents after that, so transfusions were banned for a hundred years. In 1819, the English physiologist and obstetrician J. Blundell made the first blood transfusion from person to person and proposed a device for blood transfusions. Blundell noticed that in some cases, blood transfusion causes reactions in patients, and concluded that if they occur, transfusion should be stopped immediately.



THE SCIENTIFIC PERIOD

- 1901 Karl Landsteiner discovered three human blood groups (A, B, C). He divided all people into three groups according to the ability of their blood serum and red blood cells to produce the phenomenon of isohemagglutination (gluing of red blood cells).
- 1902-Landsteiner's collaborators A. Decastello and A. Sturli found people whose blood type differed from the red blood cells and sera of the three groups mentioned. They considered this group as a deviation from the Landsteiner scheme.
- 1907 I. Yansky discovered blood type 4



Karl Landsteiner (1868-1943)

Yan Yansky (1873-1921)

THE SCIENTIFIC PERIOD

• 1940-the discovery of the RH factor by K. Landsteiner and A. Wiener — the second most important antigenic system that plays an important role in immunohematology. Almost from this moment on, the antigenic composition of human blood was intensively studied in all countries. In addition to the already known erythrocyte antigens, platelet antigens were discovered in 1953, leukocyte antigens in 1954, and antigenic differences in blood globulins were revealed in 1956.

Alexander S. Wiener (1907-1976)

Modern Transfusiology has many effective methods of correcting the composition and function of blood, and is able to influence the functions of various organs and systems of the patient.

Thank you for attention!