

BLOOD TRANSFUSIONS IN NEONATAL INTENSIVE CARE UNIT IN A UNIVERSITY HOSPITAL IN NW GREECE

AUTHORS

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- Blood transfusion is of critical importance to the care of preterm infants in neonatal intensive care units (NICUs).

- Commonly used blood components are RBCs, platelets (PLTs) and fresh frozen plasma (FFP).

- The majority of premature and extremely low birth weight (ELBW) neonates will require one transfusion of RBCs OR multiple transfusions.

- **Aim:** Present a retrospective review conducted from 2017 to 2023 related to the administration of blood components in the neonates admitted in the Neonatal Intensive Care Unit at the University Hospital of Ioannina

- Particular requirements regarding the characteristics of transfused blood products and the reported post-transfusion reactions.

- **Methods:** Data from the hospital information system as well as the reports from the haemovigilance system were recorded, analyzed and classified on the basis of the characteristics of transfused blood products and the reported post-transfusion reactions.

• Transfused RBCs

- fresh up to 5 days after collection
- pre-storage leucoreduced ($<1 \times 10^6$ leukocytes)
- irradiated where necessary
- from donors without G6PD deficiency

PLTs and FFP

- from men donors also leucodepleted .
- PLTs are irradiated where necessary.

During this study period no immediate or delayed-type adverse reactions were referred.

The indications for irradiation of blood products in neonates:

- (1) transfusion to premature infants with birth weight $<1,200$ g,
- (2) intrauterine transfusion,
- (3) transfusion of a cellular blood component obtained from a blood relative.

CONCLUSIONS

- Neonates are a special category of patients with increased transfusion needs and with special requirements for the blood products both with regards to quality and quantity.
- In our hospital we strictly follow the **neonatal transfusion protocols** concerning transfusion criteria and blood product requirements
- in this overall **seven years data review** no transfusion reaction has been recorded
- Need for close and continuous collaboration in order to obtain "dedicated" blood components.

Year	RBC units transfused	Number of newborns	FFP units transfused	Number of newborns	PLT units transfused	Number of newborns
2017	109	34	78	17	13	3
2018	188	43	80	22	10	5
2019	157	34	78	20	28	5
2020	102	22	58	8	21	5
2021	122	33	77	25	11	6
2022	146	27	56	9	38	4
2023	91	28	37	11	9	3
Total	915	221	464	112	130	27