

Umgang bei der Versorgung von RhD-negativen Patienten mit RhD-positiven Erythrozytenkonzentraten

1. Hämovigilanzbericht des Paul-Ehrlich Institutes 2020, abrufbar unter www.pei.de
2. Bundesärztekammer. Richtlinien zur Gewinnung von Blut und Blutbestandteilen und zur Anwendung von Blutprodukten (Hämotherapie), Köln: Dtsch Arztbl 2021; Kapitel 4.05 und 04.10.03.01.
3. Ji Y, Luo G, Fu Y. Incidence of anti-D alloimmunization in D-negative individuals receiving D-positive red blood cell transfusion: A systematic review and meta-analysis. Vox sang. 2022; 117(5): 633-640. doi: 10.1111/vox.13232.
4. Flommersfeld S, Mand C, Kühne Ch. Unmatched Type O RhD+ Red Blood Cells in Multiple Injured Patients. Transfus Med Hemother 2018; 45(3): 158-161.
5. Selleng K, Jenichen G, Dickau K, Selleng S, Westphal A, Müllejans B, Greinacher A. Transfusion with O RhD+ blood in emergencies does not increase mortality in RhD- patients and reduces the overall risk of anti-D immunization. Transfus med Hemother 2015; 42(S1):17.
6. Dunbar NM, Yazer MH. O-product transfusion, inventory management, and utilization during shortage: the OPTIMUS study. Transfusion 2018 Jun; 58(6): 1348-1355. doi 10.1111/trf.14547.
7. Gonzalez-Porras JG, Graciani IF, Perez-Simon JA, Martin-Sanchez J, Encinas C, Conde MP, Nieto MJ, Corral M. Prospective evaluation of a transfusion policy of D+ red blood cells into D- patients. Transfusion 2008; 17: 1318-1324.
8. Mulay SB, Jaben EA, Johnson P, Badjie K, Stubbs J. Risks and adverse outcome associated with emergency-release red blood cell transfusion. Transfusion 2013;53:1416-20.
9. Goodell PP, Uhl L, Mohammed M et al. Risk of Hemolytic Transfusion Reactions Following Emergency-release RBC Transfusion. Am J Clin Pathol 2010; 134:202-206.
10. Cardigan R, Latham T, Weaver A et al. Estimating the risks of prehospital transfusion of D-positive whole blood to trauma patients who are bleeding in England. Vox Sang 2022; 117: 701-707.
11. Yazer MN, Delaney M, Doughty H et al. It is time to reconsider the risks of transfusing RhD negative females of childbearing potential with RhD positive red blood cells in bleeding emergencies. Transfusion 2019;59;3794-3799.
12. Andrews J, Josephson CD, Young P et al. Weighing the risk of hemolytic disease of the newborn versus the benefits of using of Rh-D-positive blood products in trauma. Transfusion 2023; 63:S4-S9.
13. Yazer M, Triulzi D, Sperry J et al. Rate of Rh-D-alloimmunization after the transfusion of Rh-D-positive red blood cell containing products among injured patients of childbearing age: single center experience and narrative literature review. Hematology 2021; 26(1): 321-327.
14. O'Brien KL, Shainker SA, Callum J: Primum, non nocere: Whole blood, prehospital transfusion and anti-D hemolytic disease of the fetus and newborn. Transfusion 2023; 63: 249-256.
15. <https://www.transfusionguidelines.org/document-library/documents/nbtc-appropriate-use-of-group-o-d-negative-red-cells-final-pdf>
Stand: 28.12.2022
16. Australian Red Cross. <https://www.health.vic.gov.au/patient-care/emergency-use-of-group-o-red-blood-cells>
Stand: 20.01.2024
17. Association for the Advancement of Blood & Biotherapies <https://www.aabb.org/docs/default-source/default-document-library/resources/association-bulletins/ab19-02.pdf>
18. National Advisory Committee (NAC) on Blood and Blood Products Position Paper: Utilization and Inventory Management of Group O RH(D)-Negative Red Cells | National Advisory Committee on Blood and Blood Products (NAC) (nacblood.ca) Flommersfeld S. Supply of Rhesus D negative Patients with Rhesus D positive red blood cell units in a university hospital Transfus Med Hemother 2022; 49(S1): 5-6.
19. Chou St, Alsawas M, Fasano RM et al. American society of Hematology 2020 guidelines for sickle cell disease transfusion support. Blood Adv. 2020 Jan 28; 4(2): 327-355 doi: 10.1182/bloodadvances.2019001143.PMID: 31985807.
20. Sanz C, Nomdedeu M, Belkaid M et al. Red blood cell alloimmunization in transfused patients with myelodysplastic syndrome or chronic myelomonocytic leukemia; 2013 Apr;53(4):710-5., doi: 10.1111/j.1537-2995.2012.03819.x.PMID: 22845746.
21. Yanli Ji, Guangping Luo, Yongshui Fu. Incidence of anti-D alloimmunization in D-negative individuals receiving D positive red blood cell transfusion: a systematic review and meta-analysis. Vox sang. 2022; 117: 633-640.
22. Flommersfeld S, Marschall R, Bein G, Sachs UJ. Follow-up of antibody screen in Rhesus D negative patients transfused with Rhesus D positive red blood cell units. Trans Med Hemother 2016(9);43(S1):53.

23. Mulay SB, Jaben EA, Johnson P, Badjie K, Stubbs J. Risks and adverse outcome associated with emergency-release red blood cell transfusion. *Transfusion* 2013; 53:1416-1420.
24. Flommersfeld S. Supply of Rhesus D negative Patients with Rhesus D positive red blood cell units in a university hospital *Transfus Med Hemother* 2022; 49(S1): 5-84.