



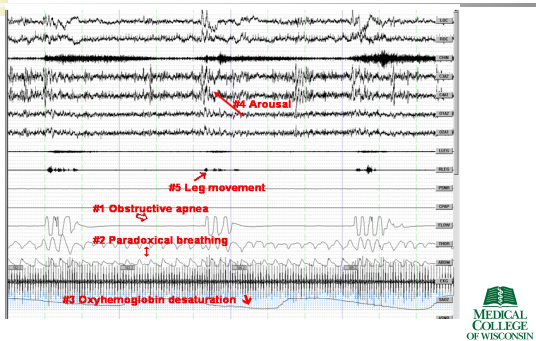
Perioperative Blood Transfusion in the Sickle Cell Patient

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Patient Background





Hospital Course

Intra-op

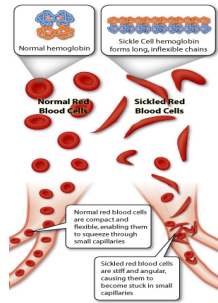
- Pt pre-oxygenated
- Smooth IV induction with Propofol, Fentanyl
- Airway secured easily with oral RAE ETT
- Smooth intra-op course, VSS, well hydrated, extubated at end of case, and transported to PACU
- Subsequent planned admission to PICU for monitoring of OSA status

Post-op

- POD 1 – Pt restless O/N and non compliant with BIPAP. Intermittent desaturations
- POD 2 – Increasing work of breathing, worsening hypoxia, hypercapnia, new RML opacity on CXR. Started on broad spectrum Abx, Hematology consulted
- POD 3 – Exchange transfusion initiated, Abx continued
- Pt recovers, and is discharged on POD 5



Sickle Cell Anemia



Acute Chest Syndrome

- Second
- Multif
- Unknown
- Diagn
- segment
- Ten
- Treatm
- Pre
- Re

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mortality risk

Operative,

plete lung

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nsfusion



Exchange vs. Simple Transfusion

ORIGINAL ARTICLE

A Comparison of Conservative and Aggressive Transfusion Regimens in the Perioperative Management of Sickle Cell Disease

Elliot P. Vichinsky, M.D., Charles M. Haberman, M.D., Lynne Neumayr, M.D., Ann Noonan Earles, R.N., P.N.P., Dennis Black, Ph.D., Mabel Koshy, M.D., Charles Pegelow, M.D., Miguel Abboud, M.D., Kivaku Ohene-Frempong, M.D., Rathi V. Iyer, M.D., and the Preoperative Transfusion in Sickle Cell Disease Study Group

N Engl J Med 1995; 333:206-214 | July 27, 1995 | DOI: 10.1056/NEJM199507273330402





Conclusion

- Sickle Cell Anemia is common
- Preoperative blood transfusion recommendations are still controversial
- The need for an **exchange versus simple transfusion** needs to be decided on an individual bases taking all co-morbidities into account.

References:

1. Vichinsky EP, et al. *New England Journal of Medicine* 1995; 333 (4):206-13.
2. Howard J, Mallory M, Lewelyn C, Choo L, Hodge R, et al. (2013). *The Lancet*, (2013) 930 - 938.
3. Warwick A, Walker I. (2003) *Pediatric Anesthesia* 13, 473 - 489.