

PEDIATRIC PATIENT BLOOD MANAGEMENT PROGRAM IN SCOLIOSIS SURGERY: NET CLINICAL BENEFITS



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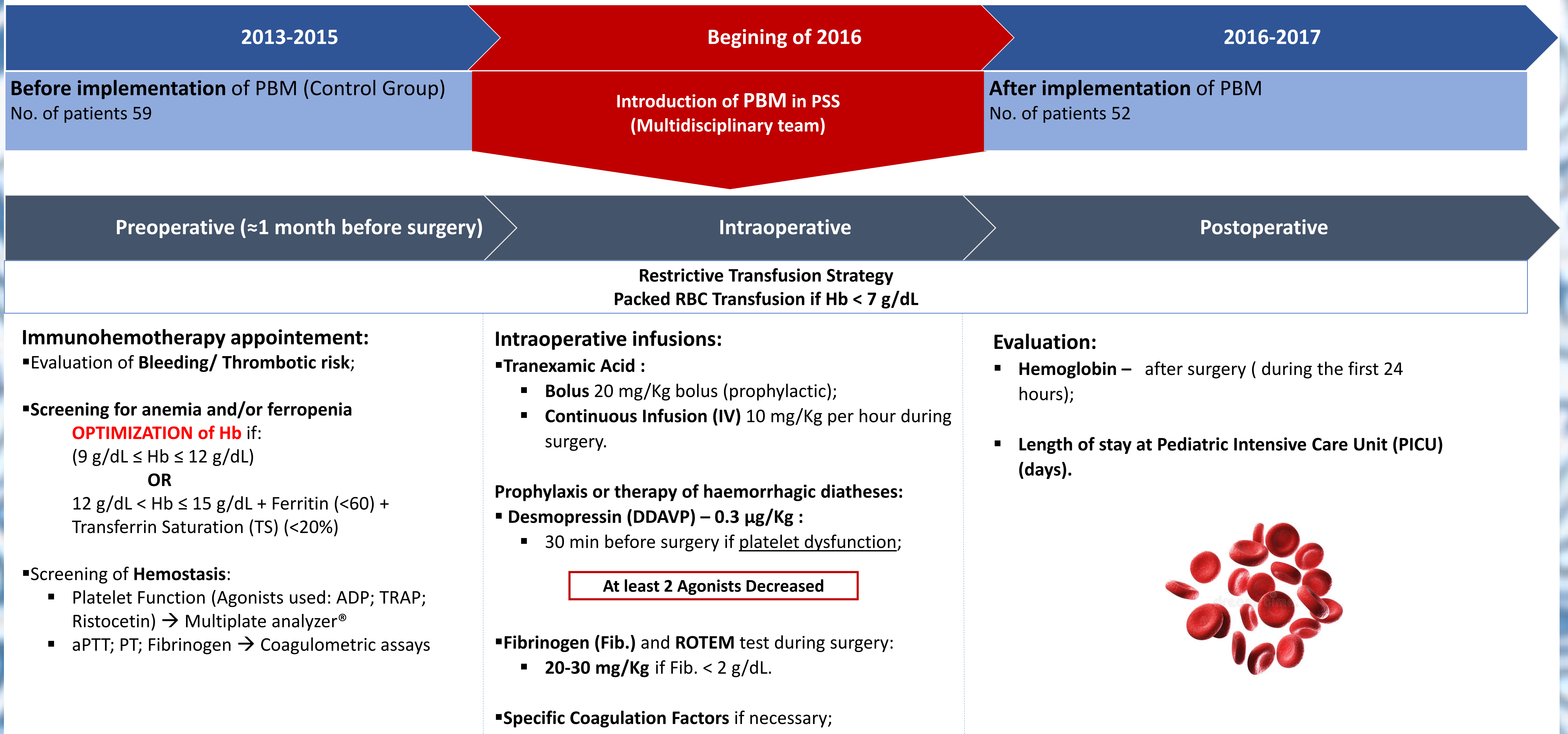
INTRODUCTION

- Scoliosis affects 2-4% of children;
- The aim of Pediatric Scoliosis Surgery (PSS) is to avoid worsening of respiratory and cardiac function;
- This surgery is associated with high rates of packed red blood cells (RBC) transfusion (bleeding risk is greater in neuromuscular etiology);
- Patient Blood Management (PBM) programs have been introduced to minimize the use of blood transfusion;
- In January 2016, at our institution, a Pediatric PBM program was adopted in pediatric patients undergoing PSS.

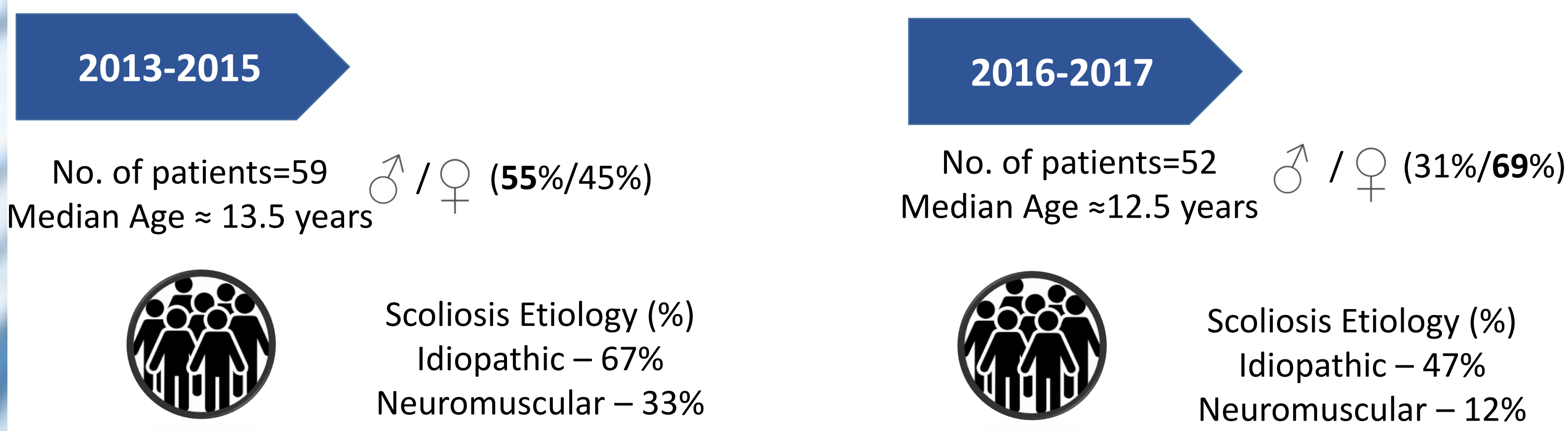


AIM of our study: Evaluate the efficiency of our PBM program.

METHODS



RESULTS



PBM Program

- **Iron supplementation**
 - No. of patients 40 (oral intake or IV);
 - Mean dose (oral intake) = 4 mg/Kg;
 - Mean dose (IV administration - Ferric carboxymaltose and iron sucrose)=20.08 mg/Kg and 9.3 mg/Kg;
- **Impairment of Platelet Function**
 - No. of patients: **8 (DDAVP prophylaxis);**
- **Administration of Factor Concentrates**
 - No. of patients: **1** – Administration of coagulation FVII concentrate.

Comparison	2013-2015	2016-2017
Preoperative Hb (median g/dL)	13.2	13.4
Postoperative Hb (median g/dL)	9.3	10.0
Number of packed RBCs transfused (median)	2	0
Length of Pediatric Intensive Care Unit admission (median days)	3.06	1.85

CONCLUSIONS

- The median of packed RBCs consumed in the perioperative period decreased from two (2013-2015) to zero (2016-2017);
- The length of stay at PICU followed the same pattern, prior to PBM the patients had a median stay of 3 days at PICU, after PBM implementation they only spend 1.85 days at the unit;
- The implementation of the PBM program allowed for a substantial decrease of packed RBC transfusion and length of PICU admission.



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 (2) Pérez Ferrer, A., Gredilla-Díaz, E., Vicente-Sánchez, J. d., Sánchez Pérez Grueso, F., & Gilsanz-Rodríguez, F. (2015). Implementation of a patient blood management programme in pediatric scoliosis surgery. *Revista Española de Anestesiología y Reanimación*, 69-77.