

# 6<sup>th</sup> World Congress on Spine and Spinal Disorders

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## Patient blood management in major Spine Surgery

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**Statement of the Problem:** Patient Blood Management (PBM) is a multimodal, multidisciplinary strategy that aims at reducing surgical associated transfusions by acting on three great “pillars”: optimizing erythropoiesis, reducing blood loss, and promoting the use of restrictive transfusion thresholds while maximizing anemia tolerance. Complex surgical spine procedures have a high peri-operative transfusion rate, up to 60-70%, which is consistent with our current practice. The purpose of this study is to describe how the implementation of a three-pillar PBM program has changed the transfusion rate in patients undergoing major spine surgery in our institution.

**Methodology:** We planned a before-after observational study: patients in the “before” group were treated according to the standard of care before the implementation of the PBM program. Patients in the “after” group were treated according to the recommendations of PBM, among which the most important were: 1. Diagnosis and treatment of pre-operative anemia: all patients were screened for the presence and causes of anemia at least 4 weeks before surgery, and treated with iron/vitaminB12 supplements according to laboratory results. 2. Use of technical and pharmacological techniques to minimize blood loss: all patients without contraindications received intravenous tranexamic acid; the position was optimized; maintenance normothermia was ensured; the diligent hemostatic surgical technique was applied 3. Application of restrictive transfusion threshold: in hemodynamically stable patients, a threshold of hemoglobin 7-8 g/dl was applied.

**Results and Conclusion:** The study is still ongoing. We plan to enroll 50 patients per group to perform data analysis.

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