

The usefulness of preoperative anesthesia and laboratory evaluation for pediatric patients undergoing fusion for idiopathic scoliosis.

Introduction:

At our institution, pediatric patients undergoing major orthopedic surgery, such as multilevel spine fusions, are often referred to the Pre-anesthesia and Testing Center for preoperative evaluation and laboratory analysis. The PETC staff screens referrals to determine if patients would benefit from evaluation, prior to their appointments. While these appointments and tests are thought to increase patient safety, their utility has not been assessed. Furthermore, PETC evaluations have associated costs, work/school hours lost and pain with lab draws. The PETC clinic is staffed by doctors, nurse practitioners, and specialized nurses. The purpose of this study is to determine the rate of increased work-up or postponed surgery following PETC evaluation.

Methods:

This is a retrospective case series. The medical records of all pediatric patients undergoing posterior spinal fusion for idiopathic scoliosis between January 1st, 2023 and May 1st, 2025. Patients with neuromuscular, syndromic, and congenital scoliosis were excluded. PETC notes were queried for relevant clinical data. Changes in preoperative work-up or surgical scheduling were noted. Results of laboratory tests were also evaluated.

Results:

Thirty-five patients underwent posterior spine fusion idiopathic scoliosis. The mean age was 13.9 ± 1.9 . Thirty-one patients had PETC evaluations, with 17 in person. The 4 patients without PETC evaluation, were deferred by anesthesia staff during the PETC screening process. Past medical history and planned surgical procedure (levels of fusion) were not different for patients with and without PETC evaluation. No patients required further preoperative work-up. No patients had their surgery postponed or cancelled following their PETC evaluation. There were no preoperative or intraoperative interventions based on preoperative labs.

Conclusion:

Preoperative PETC evaluations of pediatric patients undergoing posterior spinal fusions did not result in any change in patient care. Similarly, preoperative labs provide little benefit for this patient population. However, further research, including larger sample sizes, is needed prior to instituting a change in preoperative protocols.