

**Purpose:** Infection is a common complication in scoliotic pediatric patients undergoing correction with posterior spinal instrumentation. While explantation is considered the standard approach, it prolongs and often compromises correction and is associated with increased morbidity. The objective of this study is to evaluate the efficacy and cost-effectiveness of a salvage protocol for treating posterior spinal infection that does not involve instrumentation removal.

**Methods:** The medical records of all instrumented patients treated for posterior spinal infections using the salvage protocol between 2005-2010 were reviewed. Once infection was diagnosed a 12 week course of intravenous antibiotics was initiated. The spinal wound was then treated with incision and drainage, followed by washout with 10L of normal saline delivered by pulse lavage. The wound was covered with a vacuum-assist closure device and washout procedures were repeated every three days until quantitative bacterial cultures indicated less than 10,000 CFUs. At that time instrumentation was covered by paraspinous muscle flap and the wound closed.

**Experience:** Fifty-six pediatric patients with infected spinal instrumentation were treated with the salvage protocol between 2005-2010. The average age was 10 years old (range 7-17) and mean follow-up was 2.3 years.

**Results:** Back closure was achieved in 100% of patients following a median of 5 washout procedures (range 2-7) over an average of 22 days (range 10-40). Longterm salvage was successful in 95% (53/56) of patients, while 5% (3/56) developed recurrent infection prompting hardware removal. The most common organism cultured was *Staphylococcus aureus* (80%), followed by Gram-negative rods (15%) and *Staphylococcus epidermidis* (5%).

**Conclusions:** In most cases pediatric posterior spinal infections can be successfully treated without removal of instrumentation. Salvage is accomplished by performing serial washouts until bacterial counts are sufficiently low to permit regional flap coverage and delayed closure. We believe that regional flap coverage of the spinal hardware enhances antibiotic delivery and is essential to containing bacterial colonization.