**CASE REPORT**

A 3 year old child with history of asthma, acampomelic campomelic dysplasia, androgen insensitivity, Pierre Robin syndrome, and severe kyphoscoliosis presented to the operating room for a T4- L4 Spine Posterior Exposure/Decompression And Pedicle screw placement from L2-L3. The patient was presented in a full torso Risser cast. Anesthesia was induced with an inhalational induction after which a 20 gauge intravenous line was placed and the patient was successfully intubated. A second 20 gauge intravenous line was secured, and an arterial line was placed. The patient was turned prone and surgeons proceeded with placement of L2-L3 pedicle screws. During exposure of the thoracic spine the anesthesiology team was notified by neurophysiologic monitoring that they lost motor evoked potentials (MEPs) in the lower extremity. Consensus between the anesthesiologists and the surgeons was to perform a wakeup test. Anesthetic agents were turned off, the patient awoke and was able to move only the upper extremity. The acute spinal cord injury protocol was immediately implemented, in addition the surgeon requested an IV lidocaine infusion be started at 1mg/kg/hr. Neurosurgery was called to decompress the thoracic spine. After surgical decompression MEPs did not return. The incision was closed and the patient was emergently taken to MRI. MRI did not show any surgical trauma to the spinal cord. The final surgical procedure was posterior lumbar exposure and L2-3 pedicle screw placement, thoracic spine exposure and decompression. By post-op day 10 the patient did have return of partial sensation in her lower extremity but remains paralyzed.

**DISCUSSION**

Successful anesthetic management of patients undergoing surgery to repair and minimize scoliosis requires specific attention to possible cardiopulmonary challenges. Their disease process predisposes these patients to restrictive lung disease, pulmonary hypertension, and even cor pulmonale. (1)(2) The goals of anesthetic management in these patients include careful attention to positioning, mean arterial blood pressure, blood loss, temperature, orbital pressure/edema, and constant communication between the anesthesiology, surgical and neuromonitoring teams.

In this specific case during exposure of the thoracic spine the anesthesia team was notified by neurophysiologic monitoring team that they lost motor evoked potentials (MEPs) in the lower extremity. After multiple attempts at obtaining MEPs and after all wiring was checked and rechecked a consensus was reached to perform a wakeup test. The wakeup test is a useful clinical tool to assess paralysis, but requires preoperative planning and appropriate anesthetic technique.

**CONCLUSION**

The incidence of paralysis during and after scoliosis surgery is 0.25% - 3.2%. (3) Constant communication between the anesthesiology, surgical and neuromonitoring teams is vital to optimize patient outcomes.

References: