

clinical need. For example, the lowest carbon footprint would be achieved with an uncomplicated vaginal delivery not requiring pharmacological analgesia. Unfortunately, this is seldom the case, and a large carbon footprint is to be expected in prolonged labor necessitating N<sub>2</sub>O-mediated analgesia, followed by an emergency cesarean delivery.

As anesthesiologists, we have a supreme responsibility to take care of safety and well-being of our patients undergoing surgery. However, we equally have an ethical obligation toward environmental sustainability and protection, as this directly affects the health of the general population. By assuring environmentally conscious practices, we are safeguarding humanity's viability for healthy coexistence. Raising awareness is the first step to lessening our daily carbon footprint.

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## #36852 SPINAL ANAESTHESIA FOR AWAKE LUMBAR SPINE SURGERY: A NICHE BUT EMERGING INDICATION?

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Spinal anesthesia for lumbar spine surgery is a technique that provides excellent operating conditions and patient satisfaction. The ability to avoid a general anesthetic and the requisite management of the airway is attractive to many patients. In contrast to the frequently-challenging period after emergence with spine surgery under general anesthesia, spinal anesthesia provides a 'soft landing' in the early postoperative period as the block of the lumbar area recedes slowly. In this lecture, I will discuss our experience with awake lumbar spine surgery under spinal anesthesia and provide perspective on several important considerations including:

- What does 'awake spine surgery' really mean? Are all patients wide awake? Is some sedation ok? What sedative agents/plans are appropriate and safe in this setting?
- Patient selection: Who CAN get awake spine surgery? Who should NOT be considered for awake spine surgery?
- Communication with patient and surgeon: How to set expectations ahead of time with the patient, the surgeon, and the perioperative team?
- Technique: The how, where, when and what of our intraoperative regimen with a recipe for success
- Pitfalls: What can go wrong in awake spine surgery? How to predict and prepare for these
- Outcomes: Why do we do this? Are we really making a difference? Here we discuss some of the important data that support the use of awake spine surgery in selected patients.

## Expert opinion

### #36755 ANAESTHESIA CONSIDERATION IN SCOLIOSIS SURGERY

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Scoliosis Is an abnormal lateral curvature of the spinal column. Cobb angle of 10 degrees regarded as a minimum angulation to define it. The most common form of scoliosis is idiopathic.

Preoperative evaluation include assessment for the presence and severity of pulmonary dysfunction from restrictive lung disease. It's unlikely will improve during scoliosis surgery and may make intraoperative and postoperative ventilation challenging. Significant postoperative atelectasis should be anticipated, and in severe cases of scoliosis, prolong postoperative ventilation may be required. Cardiac function is one more important side that we have to consider. Regional hypoventilation caused by abnormal diaphragm movement and chronic hypercarbia and hypoxemia from advanced pulmonary disease can lead to pulmonary hypertension and of the right ventricle failure.

A large incision may lead to loss of up to one half of a patient's blood volume. To prevent haemorrhage complication next steps are require: preoperative iron supplementation or erythropoietin, Cell Saver mashing, Deliberate hypotension, arterial access for PPV, SVV and CO, goal directed fluid therapy, Thromboelastography, proper prone positioning, neuromonitoring.

Due to the large wound area and traumatic spinal correction, patients suffer from severe pain immediately after scoliosis surgery. The treatment of this postoperative pain remains one of the major challenges in scoliosis surgery, and insufficient treatment can increase postoperative morbidity, complication rates, and length of hospitalization.

We have following options – epidural anaesthesia, intrathecal morphine, Lidocaine iv and ketamine, ESP block.

Epidural finds its place in pain management after spinal surgery. Epidural catheter can be used as an effective means of postoperative pain management for children with scoliosis, it is more effective than intravenous patient-controlled analgesia in postoperative pain management after posterior spinal fusion. It accelerates postoperative mobilization, independent