
Unconventional positioning in severely kyphotic patient for retinal detachment surgery

Sir,

Supine position is a norm for ophthalmic surgeries. Patients with advanced kyphosis pose a unique challenge, not only in terms of patient position and comfort but also surgeon satisfaction ergonomically. These threats become more pronounced in

vitreoretinal (VR) surgeries as they are longer than cataract surgeries. Surgeons have implemented innovations like face to face upright surgeries,^[1] or Trendelenburg position,^[2] to combat these issues in patients who cannot lie supine. However, Trendelenburg position has its own inherent risks like vitreous thrust and respiratory embarrassment.

We report a case of a 64-year-old, 58 kg male with advanced thoracolumbar kyphosis (T10 to L2) who came for retinal detachment surgery [Figure 1]. The surgical plan was parsplana vitrectomy with band buckling, endolaser and silicon oil injection.

Preanaesthetic evaluation revealed an abnormal stooped gait. History and examination of cardiovascular and respiratory system was normal. Preoperative investigations were unremarkable. He was refused surgery from multiple centres due to his inability to lie supine. Base line heart rate was 88/min and blood pressure was 136/74 mm Hg. Respiratory rate was 20/min and oxygen saturation was 97% on room air. Patient was appropriately counselled about intravenous sedation to allay the physical discomfort of unusual positioning in conjunction with peribulbar block. An intravenous cannula was secured. Premedication was done with inj ondansetron 8 mg. The head end was raised with the help of pillows and bolsters were placed between the neck and shoulders. The feet were placed on a high pillow and the thighs were flexed [Figure 2]. The surgeon's chair was also accordingly adjusted to the highest level and the footswitch of the microscope and vitrectomy machine were placed on a pedestal. Standard monitoring included electrocardiography, non-invasive blood pressure and pulse oximetry. Respiratory rate and sedation level was assessed at an interval of 10 min. Oxygen @ 2 litre/min via a nasal cannula was supplemented. Inj dexmedetomidine (DEX) 0.25 µg/kg was infused over 10 minutes. Then a peribulbar block with 8 ml of 1:1, 2% lignocaine and 0.5% bupivacaine with 150 IU of hyaluronidase was given. Inferotemporal injection with 5 ml and the rest 3 ml of medial canthal injection was given. DEX infusion was running @ 0.2 µg/kg/min to achieve a target Ramsay sedation score of 3 (responding to commands). There was no episode of bradycardia, hypotension, desaturation or apnea. Haemodynamics were reasonably maintained and surgery finished

uneventfully in 90 minutes. Patient was pain free in the postoperative period.

The hallmark of kyphosis is anterior flexion of the vertebral spine. There may be coexisting restrictive lung disease component which makes them prone to hypoxia and respiratory insufficiency perioperatively. Retinal surgeries per se requires dexterious manipulation at the time of sclera indentation and muscle pulling when passing the buckle, which are considered to be the most painful part of surgery. It causes a lot of discomfort with peribulbar block alone. Problem was compounded with unusual and prolonged positioning. Dose dependant sedative and analgesic properties of DEX without any respiratory depression was appropriately utilised in this case.^[3,4] It had a dual role in alleviating the pain and discomfort associated with the surgery and extreme positioning. DEX has been used as an additive agent in peribulbar blocks for VR surgeries with good surgeon satisfaction scores and better pain and sedation profile.^[5] But the modus operandi as an adjunctive agent in peribulbar block remains to be answered. We rather adhered to its established role via the intravenous route incorporating the regime of half dose DEX loading dose i.e., 0.25 µg/kg rather than full dose DEX (0.5 µg/kg) as the former offered stable haemodynamics without any adverse effects and better control of sedation levels.^[6]

It is not uncommon to encounter kyphosis and associated intraspinal anomalies.^[7] Sight saving surgery should not be deferred and DEX sedation coupled with customised positioning within the available resources proved to be a saviour.

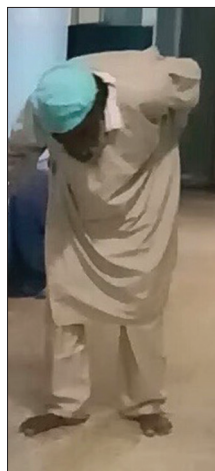


Figure 1: Advanced kyphotic patient



Figure 2: Intraoperative position

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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