Conscious Sedation: A Safe Approach For Management Of Nonagenarian Cataract Surgery

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Abstract

Dear Editor,

Geriatric patients with senile cataract have reduced physical activity and deranged physiological reserve. Pathological involvement of certain organs further compounds the physical status. However, definitive surgery should not be delayed due to senile physiological derangements. We report safe conduct of cataract surgery in two nonagenarian patients under conscious sedation with monitored anaesthesia care.

Case 1: A nonagenarian (92 years old) male patient with history of senile dementia and involuntary tremors since 10 years was scheduled for cataract extraction of right eye with intra-ocular lens (IOL) placement. His general physical condition was poor. Patient's physical activity was restricted since four years. He had involuntary movements of all four limbs and of head and neck. He talked incoherently and was not co-operative. He was edentulous and extension of neck was restricted. Scoliosis of thoracic spine was present and there was stiffness of hip and knee joints. He could lie supine with difficulty, with hip and knee joints flexed. However, he could not lie still even for a minute due to involuntary movements of limbs and of head and neck. He was hemodynamically stable with normal hematological and biochemical profile.

The patient had been refused surgery at many places due to presence of involuntary movements and dementia related changes and was referred to our institute. He was taken up for cataract extraction with IOL placement under conscious sedation with monitored anaesthesia care. He was kept fasting for six hours pre-operatively and was given no premedication. On operating table, patient was made to lie in a position comfortable to him and adequate padding with cotton was done beneath head and neck and a pillow was placed between the thighs and legs. Monitoring of heart rate, blood pressure, ECG and pulse oximetry was instituted and intravenous access secured. Continuous infusion of propofol with syringe pump was started @ 25 µg/kg/min for the initial 10 minutes and subsequently maintained @ 15-20µg/kg/min. Within few minutes, patient became still and his involuntary movements were abolished. He was sedated but arousable on verbal stimuli. Oxygen (35%) was administered through venturi-mask. Then peribulbar block was administered using the standard technique. Patient remained hemodynamically stable throughout the surgical period that lasted for 30 minutes. At the end of surgical procedure, propofol infusion was stopped and patient became fully conscious in few minutes and his involuntary movements reappeared!

Case2: A 90 years old female, suffering from Parkinson's disease was scheduled for cataract surgery. She was on regular treatment with levodopa. She could not lie still and had resting tremors of upper limbs and neck. Cataract surgery of both eyes, at a week's interval, was done conscious sedation with propofol and monitored anaesthesia care. Her peri-operative period was uneventful.

Such patients should not be refused surgery because improved vision will lead on to increased physical activity and a better social life. Conscious sedation with propofol is a simple and effective technique. Such patients may have difficulty in hearing as well. Hence, sedation should not lead to communication gap with the patient. Our patient was sedated but arousable on verbal stimuli. Heavy sedation may cause tongue to fall back that may lead to respiratory respiration. This can be easily managed by introduction of oral airway. However, in our patient sedation was just adequate with no tongue fall. Inadequate sedation may also lead to enhancement of involuntary movements. Oxygen supplementation can be done by venturi-mask or by simply keeping Bain's co-axial circuit tubing under the drapes.

Propofol has numerous advantages, viz. clear-headed recovery with no residual sedation, anti-emetic effect, short duration of action and easy titration of dose. The hemodynamic effects of propofol viz. decrease in heart rate, blood pressure, respiratory rate and tidal volume can be minimized by decreasing the dose by half in geriatric patients[1], as we did in our patient. However, some prefer midazolam to propofol because of better preservation of respiratory and hemodynamic function. Midazolam causes both sedation and amnesia but with longer dissipation of its effects when infusions are terminated. Superiority of one drug over other has not been established. Both agents should always be titrated downward to maintain sedation as required. [2]

To conclude, nonagenarian / geriatric patients suffering from dementia and involuntary movements should not be deprived of cataract surgery. Cataract surgery can be safely conducted under monitored anaesthesia care and conscious sedation with propofol or midazolam. It brings new rays of light and better hopes from life.

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