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Anesthetic approach to the patient with Lujan-Fryns syndrome

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Introduction: Lujan-Fryns Syndrome (marfanoid habitus syndrome X-linked mental retardation) involves especially the male sex. Its frequency is unknown. Mild-moderate mental retardation, marked facial dysmorphism, marfanoid appearance, extremities in the shape of long cylinders, and behavioral problems are characteristics of the syndrome. In this report, anesthesia approach to a case with Lujan-Fryns Syndrome is presented.

Case: A male patient who is 30 months old and with weight of 9 kg was planned to undergo operation by ear nose throat clinic for insertion of bilateral ear tube. In pediatric examination, mental retardation, extremity abnormalities, oropharynx palate abnormalities, and horse shoe kidney were found. In physical examination, the traces of previous operations he underwent for Morgagni hernia and cleft palate were observed. No pathology was established in routine biochemical and hematological investigations. Vital findings were stable. Patient underwent standard monitoring with ECG, heart rate, and pulse oximeter. Prior to induction of anesthesia, SpO₂ was 90%, heart rate 105 beat/min., and blood pressure 95/47 mmHg. Considering that opening airway may be difficult due to syndromic typical facial appearance, face masks, airways and laryngeal masks of varying sizes were prepared. For laryngoscopy, different size blades and endotracheal tubes were kept ready and premedication was not administered. Following about 5 minutes of preoxygenation, anesthesia induction was made with 3 mg/kg propofol and no problem was encountered with ventilation using face mask. Mask ventilation was observed to be comfortable and following adequate muscular relaxation with sevoflurane 1.5% no I-gel was placed without using neuro muscular blockers. Maintenance anesthesia was carried out with a 2% sevoflurane, 50% nitrous oxide and 50% oxygen mixture. The patient was extubated without any problems after the operation lasting about 20 minutes and after monitoring for 30 minutes in recovery room, patient was sent to his clinic.

Discussion: Diaphragm hernia and pulmonary hypoplasia are the most common anomalies occurring in this syndrome. Limited pulmonary reserves and marked facial dysmorphism makes it difficult to have a secure airway. Cardiovascular malformations should also be taken into consideration. In the present case, in spite of probable difficulty in airway and hemostability, sevoflurane-N₂O maintenance enabled safe and reliable anesthesia.

Conclusion: It is our opinion that, in Lujan-Fryns syndrome, complications may decrease by a careful preoperative evaluation, securing airway and providing optimal conditions in the induction and maintenance of anesthesia.

Biography

Ozkan Onal has completed his medical education at Gazi University Medical Faculty and he was specialized in anesthesiology in Hacettepe University Medical Faculty. He has more than 15 publications in reputed journals in the field of anesthesia.

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