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A Case Report on Anesthetic Considerations in a Neonate with Isolated Oesophageal Atresia with Radiological Fallacy

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Abstract : Esophageal atresia is a disorder of maldevelopment of esophagus with or without a connection to the trachea. Radiological reviews are needed in consultation with the pediatric surgeon and neonatologist and we report a rare case of esophageal atresia associated with atrial septal defect-patent ductus arteriosus complex. A 2-day old female baby born at term, weighing 3.010kg, admitted to the Neonatal Intensive Care Unit with respiratory distress and excessive oral secretions. On examination, continuous murmur and cyanosis were seen. Esophageal atresia was suspected, after a failed attempt to pass a nasogastric tube. Chest radiograph showed coiling of the nasogastric tube and absent gas shadow in the abdomen. Echocardiography confirmed Patent Ductus Arteriosus with Atrial Septal Defect not in failure and was diagnosed with esophageal atresia with suspected fistula posted for surgical repair. After preliminary management with oxygenation, suctioning in prone position and antibiotics, investigations revealed Hb 17gms serum biochemistry, coagulation profile and C-Reactive Protein Test normal. The baby was premedicated with 5mcg of fentanyl and 100 mcg of midazolam and a rapid awake laryngoscopy was done to rule out difficult airway followed by induction with o2 air, sevo and atracurium 2 mg. Placement of a 3.5 tube was uneventful at first attempt and after confirming bilateral air entry positioned in the lateral position for Right thoracotomy. A pulse oximeter, Echocardiogram, Non-invasive Blood Pressure, temperature and a precordial stethoscope in left axilla were essential monitors. During thoracotomy, both the ends of the esophagus and the fistula could not be located after thorough search suggesting an on table finding of type A esophageal atresia. The baby was repositioned for gastrostomy, and cervical esophagostomy ventilated overnight and extubated uneventful. Absent gas shadow was overlooked and the purpose of this presentation is to create an awareness between the neonatologist, pediatric surgeons and anesthesiologist regarding variation of typing of Tracheoesophageal fistula pre and intraoperatively. A need for imaging modalities warranted for a definitive diagnosis in the presence of a gasless stomach.

Keywords : anesthetic, atrial septal defects, esophageal atresia, patent ductus arteriosus, perioperative, chest x-ray
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