Thoracic epidural anaesthesia performed during open cholecystectomy in a patient with situs inversus totalis in Kartagener`s syndrome

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Background: Kartagener`s syndrome is a rare condition with immotile cilia comprising the triad of situs inversus, chronic sinusitis, and bronchiectasis which affects 20% of patients with situs inversus.General anaesthesia in this high surgical risk patient can trigger cardiac and pulmonary complications..

Case report: A 83 years old obese female ASA II presented to our surgical clinic for open cholecystectomy with chief complaints of pain and left hypochondrium for the last 5 days accompanied by nausea and vomiting.She had a history of intermittent left upper quadrant, pain, emesis, fever, elevated transaminases, elevated bilirubinemia, leukocytosis since 3 weeks ago. She was known as dextrocardia treated on medications for arterial hypertension, recurrent pulmonary infections and sinusitis. An abdominal echography showed the left position of liver that supported the diagnosis of acute cholecystitis in the presence biliary cholelithiasis.

Electrocardiograph (ECG) showed T wave inversion in anterolateral leads I, aVL, V₂ to V₆ with deep Q waves in lead I and aVL. A chest X-Ray revealed bilateral basal consolidation. A thoraco-abdominal tomography(CT) was done that confirmed situs inversus totalis and bilateral bronchiectasis. Pulmonary function tests showed a PEF of 216 L/min,FEF 25% 1.07L,FEF 50% 1.19L,FEF 75% 0.27L FEV₁1.15L,MVV 47% compatible with moderate-severe obstruction.Pre-anaesthetic evaluation revealed Mallampatti class II,a pulse rate of 77/min, blood pressure of 145/88 mmHg.Thoracic epidural anesthesia was employed at the level T9-T10 with 20 ml Bupivacaine 0.5% mixed 100 mcg fentanyl. The analgesia and muscle relaxation were optimal during the intervention which lasted about 1 hour. A mild sedation was performed with 50 mg propofol and 3 mg midazolam. Patient was transfered at the ward for further postoperative treatments such as physiotherapy,antibiotics and bronchodilators.The post-operative period was uneventful and the patient was discharged in satisfactory conditions on the tenth day and the patient is alive checking up constantly.

A total cost calculation of all days treatment and intervention in our hospital was done and resulted 305 euro.

Discussion: We founded at the literature same cases undergoing surgery and implications under general anaesthesia such as left endobronchial placement of the endotracheal tube, prolonged paralysis after administration of succinylcholine, masseter spasm, prolonged post-operative apnoea. Because of mucociliary dysfunction and airway anomalies these patients are predisposed to considerable implications during induction and intubation.Moreover preoperative pulmonary disease and advancing age are associated with high incidence of atelectasis,pneumonia,pulmonary embolism and respiratory failure.We choosed to perform thoracic epidural anaesthesia as a sole and the safest anaesthetic technique to prevent these complications and to reduce postoperative pain and vomiting.

Learning points: Epidural anaesthesia has been shown to reduce intraoperative and postoperative complications in a patient with Kartagener`s syndrome undergoing open cholecistectomy.

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