APPENDECTOMY IN A PATIENT WITH SITUS INVERSUS

Fakhrul Islam

Department of Surgery,
District Headquarter Hospital, Swabi.

INTRODUCTION

Situs Inversus is a rare embryological anomaly, in which organs are transposed from their normal to location on the opposite side of the body (The mirror Image of Normal).[1] The incidence varies from 1 in 6000-35000 live birth.[2] The cause of the transposition is genetic and transmitted by autosomal recessive gene.[3, 6] This anomaly complicate diagnosis and management of acute abdominal conditions like Acute Appendicitis, Diverticuktis and biliary colic.[4]

Appendicitis is a common surgical emergency, but very few number of Appendectomy are reported in patient with Situs Inversus[5] and present diagnostic difficulty and definitive treatment is delayed.[1]

We present a case of acute appendicitis in patient with Situs Inversus. She was treated successfully by appendectomy.

CASE REPORT

A 13 years old girl presented with complaint of pain in left iliac fossa associated with nausea and vomiting. There was tenderness and rebound tenderness on physical examinations. Total leucocyte count was 13000/cmm, urine examination, X-ray and KUB (Kidney and Urinary Bladder) was normal. The Patient was given antibiotic, analgesic and metranidazol but there was no improvement.

The Patient was further investigated by abdominal Ultrasounds and X-ray Chest, which revealed Dexlrocardia and Situs Inversus. The Patient was explored by left transverse Subumbilical incision after a delay of 24 hours. The appendix was perforated. Appendectomy was performed peritoneal toilet was done with normal Saline. A drain was put in the Pelvis, which was removed on second postoperative day. The recovery was uneventful and the patient was discharged on 5th postoperative day.

DISCUSSION

Situs Inversus totalis, if not associated with other congenital anomalies, permits normal life and may remain unknown. The anomaly has genetic predisposition and is autosomal recessive in nature. The defect is localized on the long arm of chromosome 14.[6]

Congenital anomalies such as Pancreatic fibrosis, intrahepatic dysgensis and renal dysplasia may be present [7] Dextrocardia anomalies such as Fallot's Tetrology, Atrial Septal defect, Ventricular Septal defect and transposition of great Vessels as compared to Dextrocardia with normal Situs Solitus (incidence 23 %).[5]

Respiratory anomalies like congenital absence of a lung, Bronchiactasis and Para nasal Sinuses abnormality may be present also known as Kartagener' Syndrome.[6]

The digestive anomalies are atresia/ Stenosis of duodenum, Persistent Meckel's diverticulum, Megacolan and anal atresia.[5]

There may be Ivemark Syndrome (Situs Inversus Asplenia and Cardiac anomalies) and Yoshikawa's Syndrome (sit, Bilateral renal dysplasia, Pancreatic fibrosis and meconioum ileus).[6]

Non of the above abnormalities was appreciated in our patient.

We screened her mother, two sister, a brother and a nephew for Situs Inversus Totalis by doing Ultrasound and X-ray Chest. All of them were normal. Moreover the mother and father of the patient were cousins. This points towards the genetic predisposition of the Situs Inversus in our patient, which is autosomal recessive in nature. Her father died 12 years ago but the cause for his death is unknown.

The left-sided appendix may have pain on right side in about 50% of ease. This is because the nervous component of the system is not reversed despite transposition of Viscera. And more than 41% of inappropriate incisions are reported.[4]

Appendicitis in Situs Inversus Patient is a rare intity and the diagnosis is confused with left renal colic and sigmoid diverticulitis, these conditions doesnot need any emergency procedure and the definitive treatment is delayed complication like perforation peritonitis (localized and generalized) may develop I our patient the appendix was perforated with localized peritonitis as the surgery was delayed for more than 24 hours, mover over the hospital stay was prolonged as well. Due to the transposition of Viscera the procedure may be potentially hazardous as the surgeon is not familiar with the abnormal anatomy and some of the anomalies like persistent Meckel's diverticulum may escape detection during surgery.[8] The Patient with signs and symptoms of acute appendicitis on the left side should be investigated for Situs Inversus. Abdominal ultrasound and chest X-ray are the diagnostic tools. This will avoid complications and delay in diagnosis and management of the Patient.

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Address for Correspondence:
Dr. Fakhrul Islam,
General Surgeon,
DHQ Hospital, Swabi.