

LAPAROSCOPIC CHOLECYSTECTOMY IN A RARE CASE OF SITUS INVERSUS TOTALIS

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ABSTRACT

Situs inversus is a rare congenital anomaly with an abnormally positioned gall bladder to the left side. Normally these patients live up to their normal life expectancy but in a few with cardiac abnormalities, it might be reduced. The formation of gallstones in these patients is a fairly common condition. The condition may be asymptomatic but can often produce epigastric or left hypochondrial pain associated with nausea. The following report is a rare case of left-sided gallbladder with mirror image anatomy of abdominal viscera. Mostly these patients are managed with open cholecystectomies but we performed Laparoscopic Cholecystectomy in this case.

INTRODUCTION

Situs inversus, or its most common form, situs inversus totalis, is a rare condition that occurs in 1 out of 10,000 people, whereby the abdominal organs are laterally rotated in comparison to their normal counterpart locations.¹ It is often associated with dextrocardia, a condition in which the heart too is located on the right side, as opposed to the left. The condition in itself does not increase likelihood of any disease due to the relation of the organs to each other being unchanged and most people may thus live without ever knowing of it, unless it is incidentally diagnosed.²

Cholelithiasis is a fairly common condition wherein the person will have formation of stones in their gall bladder. These stones may vary in composition, such as cholesterol stones or bile salt stones, and are often accompanied by the presence of inflammation. The condition may be asymptomatic, but can often produce pain, both local and referred, with jaundice being present in case of bile passage blockage, and may lead to further complications such as cholelithiasis and pancreatitis.³ It is diagnosed through radiological techniques such as ultrasonography after ascertaining the symptomatology.

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CASE REPORT

54 years old lady with no known co-morbidities presented to the outpatient department with a 6 months history of intermittent left hypochondrial pain. Her pain radiated to the left shoulder blade, and was associated with malaise and nausea.

Ultrasound abdomen showed left sided gall bladder with multiple small stones. Abdominal ultrasound also demonstrated the mirror image anatomy of other abdominal viscera. Dextrocardia was present on her chest X-ray. After cardiac and respiratory evaluation her laparoscopic cholecystectomy was planned.

The setting in operation theatre was modified with surgeon and camera assistant standing on right side, second assistant on left side and monitor placed towards the left shoulder. Total four ports were inserted in modified position, infra-umbilical, epigastric and two left lateral. Left sided gall bladder and liver were identified on laparoscopy. Calot's triangle dissection was started near the gall bladder and identified the normal mirror image anatomical relationship of cystic duct and cystic artery with common bile duct. No associated anomaly was found. Cyst duct and artery were clipped and divided, gall bladder dissected out and extracted through epigastric port. Patient had uneventful recovery and discharged on first postoperative day. Follow up was unremarkable.

DISCUSSION

Situs inversus is a rare condition which occurs due to malrotation of abdominal organs during fetal life. It is commonly associated with dextrocardia. These patients have no raised chances for any abdominal disease, nor are they any more predisposed to cardiac diseases more than their normal counterparts. However they are predisposed to Kartagener's syndrome.⁴

This condition can be complete, thereby known as situs inversus totalis; partial; or there may be isolated mirroring of the location of an abdominal organ, known as situs ambiguus.⁵ Patients who have levocardia along with situs inversus however, are at increased chances of anatomical diseases such as transposition of the great vessels, as are those with isolated dextrocardia.

There is no evidence showing that the prevalence of cholelithiasis is any different in people with situs inversus than in those without, and in rare cases, there could an isolated left sided gall bladder present, which too would present with symptoms mimicking the aforementioned case. As such the biggest difficulty present in the management of this case is correct diagnosis, as physical examination as well as radiology may incur confusion in the management.^{6,7} When performing surgery, it is of paramount importance for all the medical personnel involved to be informed of the anomaly. It is also advisable that these patients keep some form of condition identification, such as a card or wrist band, so that future consultations may go more smoothly.

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Figure: 01 Dextrocardia shown on Chest X-ray

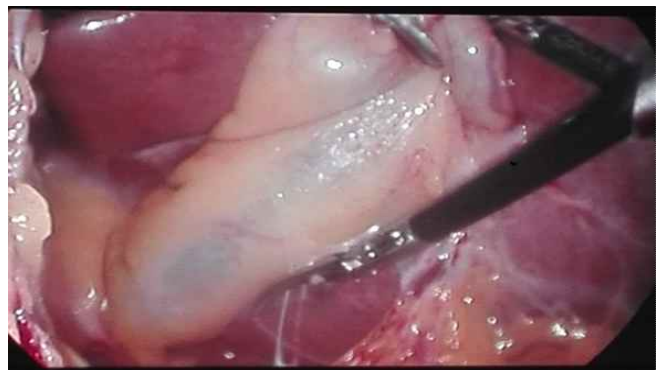


Figure: 02 Calot's triangle



Figure: 03 Laparoscopic port positions and anterior abdominal wound showing mirror image of the routine laparoscopic cholecystectomy