

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

## International Journal of Surgery Case Reports

journal homepage: [www.casereports.com](http://www.casereports.com)

## Our experience with surgery in situs inversus: Open peptic perforation repair and laparoscopic cholecystectomy in 1 patient and 3 patients respectively



Zeeshan Ahmed\*, Sami A. Khan, Sanjeev Chhabra, Rahul Yadav, Nitin Kumar, Vikesh Vij, Dhananjay Saxena, Devender Talera, Jeevan Kankaria, Shalu Gupta, Rajendra P. Bugalia, Amit Goyal, Bhanwar L. Yadav, Raj K. Jenaw

Department of General Surgery, SMS Medical College and Hospital, JLN Marg, Jaipur 302004 Rajasthan, India

## ARTICLE INFO

## Article history:

Received 17 July 2016

Received in revised form 14 October 2016

Accepted 15 October 2016

Available online 19 October 2016

## Keywords:

Situs inversus

Laparoscopic cholecystectomy

Perforation peritonitis

Omentopexy

## ABSTRACT

**INTRODUCTION:** Situs inversus is a rare autosomal recessive condition associated with complete transposition of abdominal +/- thoracic organs. Surgical diagnosis and surgical procedures in patients with situs inversus is tricky because of the mirror image anatomy of intra-abdominal organs.

**MATERIALS AND METHODS:** A retrospective analysis of 2152 and 1497 patients who underwent laparoscopic cholecystectomy and open peptic perforation repair respectively from June 2014–June 2016 was done. 1 patient and 3 patients with situs inversus underwent open peptic perforation repair and laparoscopic cholecystectomy respectively. A 10 mm left para-median port 5 cm caudally from xiphoid was used for grasping the infundibulum. Two 5 mm ports placed 10 cm caudally from costal margin in the mid-clavicular and anterior axillary line were used for dissecting and retracting fundus respectively. A 10 mm supra-umbilical camera port was used.

**RESULTS:** A 40 year male with situs inversus totalis underwent open peptic perforation repair. Laparoscopic cholecystectomy was done in 3 female patients with situs inversus aged 33–46 year (mean 41 year). Mean operative time for laparoscopic cholecystectomy was 59 min (39–93). There were no intraoperative or post-operative complications. Histopathology revealed chronic inflammation in peptic perforation and cholecystitis.

**CONCLUSION:** Perforation peritonitis in situs inversus can cause diagnostic confusion with free gas under the left hemi diaphragm. Laparoscopic cholecystectomy in situs inversus is ergonomically inconvenient and technically difficult for right handed surgeons. We describe an ergonomically convenient port placement for right handed surgeons in situs inversus.

© 2016 The Authors. Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### 1. Introduction

Situs inversus is an autosomal recessive condition involving mirror image transposition of abdominal and thoracic organs and an incidence of 1/10,000 to 1/20,000 [1]. When the heart is also transposed towards the right, it is called situs inversus totalis. Situs inversus partialis is a much rarer condition where the heart remains on the normal side [1]. Surgical diagnosis and procedures

can be tricky in these patients due to mirror image transposition of intraabdominal organs. Perforation peritonitis can present as gas under left hemidiaphragm [2] or the fundus air shadow on right side can be mistaken for free gas under right hemidiaphragm [3]. Laparoscopic cholecystectomy for symptomatic gall stone disease in situs inversus can be problematic for right handed surgeons. Many of them adapt by using the left midclavicular port for dissection instead of the epigastric port [4]. But, this technique is ergonomically inconvenient as the surgeon has to extend his dissecting arm across the patient's body. We describe a modified 4 port technique in 3 patients with situs inversus which is ergonomically more convenient for right handed surgeons. This technique can also be used by left handed surgeons in conventional right sided laparoscopic cholecystectomy. This article has been written in line with the SCARE criteria as described by Agha et al. for the SCARE group. 'The SCARE Statement: Consensus-based surgical case report guidelines. International Journal of Surgery 2016' [5].

\* Corresponding author.

E-mail addresses: [zeeshan\\_zuby@yahoo.co.in](mailto:zeeshan_zuby@yahoo.co.in)

(Z. Ahmed), [drsamianwarkhan@gmail.com](mailto:drsamianwarkhan@gmail.com)

(S.A. Khan), [dr.sanjeevpremhhabra@gmail.com](mailto:dr.sanjeevpremhhabra@gmail.com) (S. Chhabra), [rahul073@gmail.com](mailto:rahul073@gmail.com)

(R. Yadav), [dmritinkumar2010@gmail.com](mailto:dmritinkumar2010@gmail.com) (N. Kumar), [vikesh14vij@gmail.com](mailto:vikesh14vij@gmail.com)

(V. Vij), [dr.dhananjaysaxena@gmail.com](mailto:dr.dhananjaysaxena@gmail.com) (D. Saxena), [taleraadevaipg108@gmail.com](mailto:taleraadevaipg108@gmail.com)

(D. Talera), [jeevan.kankaria@gmail.com](mailto:jeevan.kankaria@gmail.com) (J. Kankaria),

[drshalu\\_gupta@yahoo.com](mailto:drshalu_gupta@yahoo.com) (S. Gupta), [drpbuglia@gmail.com](mailto:drpbuglia@gmail.com)

(R.P. Bugalia), [amitgoyal0304@gmail.com](mailto:amitgoyal0304@gmail.com) (A. Goyal), [dr.bhanwar.yadav@gmail.com](mailto:dr.bhanwar.yadav@gmail.com)

(B.L. Yadav), [jenawrk@yahoo.com](mailto:jenawrk@yahoo.com) (R.K. Jenaw).

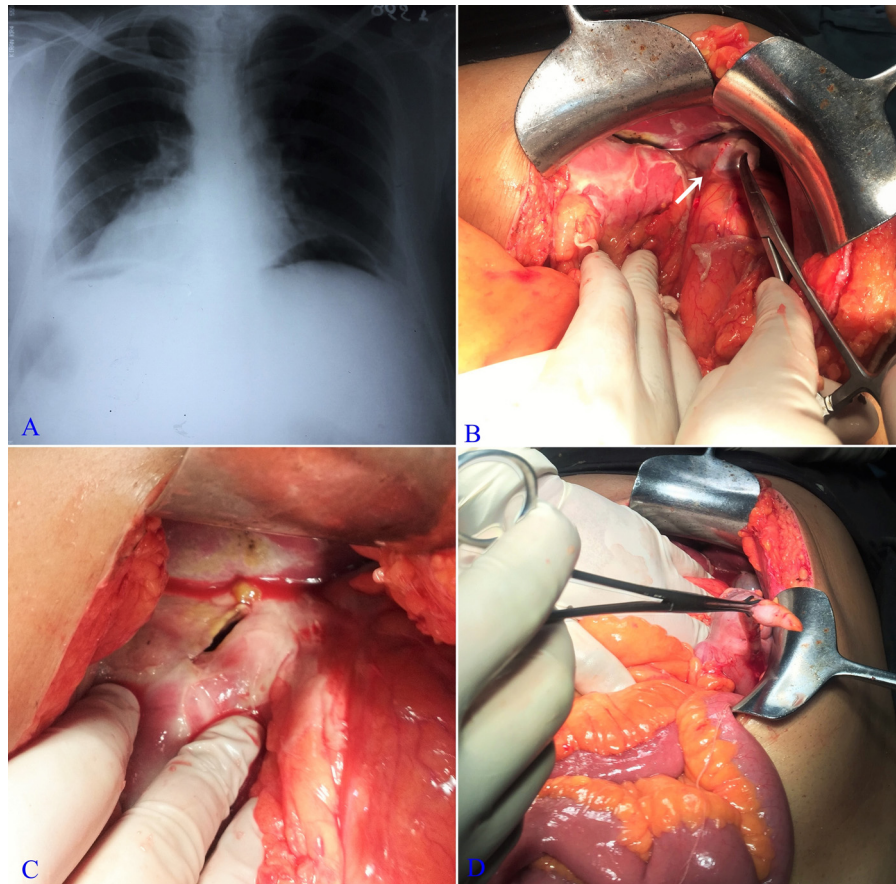
<http://dx.doi.org/10.1016/j.ijscr.2016.10.035>

2210–2612/© 2016 The Authors. Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Table 1**

Patient demographic and clinical characteristics. M (Male); F(Female); LUQ(Left upper quadrant); POD(Post-operative day); SIP(Situs inversus partialis); SIT(Situs inversus totalis).

Patient No.	Age/Sex	Presenting complaints	Duration of symptoms	Diagnosis	Management	Operative time	Complications	Discharge	Histopathology
1.	40/M	Epigastric pain followed by diffuse abdominal pain	4 days	Perforation peritonitis with SIT	Exploratory laparotomy with peptic perforation repair and appendectomy	65 min	–	POD 6	Chronic inflammation
2.	46/F	LUQ pain with fever and vomiting	5 days	Acute cholecystitis with SIP	Conservative followed by interval laparoscopic cholecystectomy after 6 weeks	93 min	–	POD 2	Cholecystitis
3.	44/F	Recurrent LUQ pain	6 months	Cholelithiasis with SIT	Elective laparoscopic cholecystectomy	39 min	–	POD 1	Cholecystitis
4.	33/F	Recurrent LUQ pain	3 months	Cholelithiasis with SIT	Elective laparoscopic cholecystectomy	45 min	–	POD 1	Cholecystitis



**Fig. 1.** in Patient 1 (A) Chest X-ray erect PA view showing dextrocardia with fudus air shadow of right side with free intra-peritoneal air under left hemidiaphragm. (B) Liver and gall bladder (white arrow) on the left side. (C) A 2.5 cm × 0.5 cm antral perforation on anterior wall of stomach. (D) Appendix on left side.

**2. Patients and methods**

This study was a retrospective analysis of all patients who underwent laparoscopic cholecystectomy and exploratory laparotomy for perforation peritonitis at SMS Hospital, Jaipur from June

2014 to June 2016. Patients with situs inversus and symptomatic cholelithiasis or perforation peritonitis were included.

All patients presenting with acute upper abdominal pain and tenderness on abdominal examination were investigated with a Chest X-ray (CXR) erect and an Ultrasound (USG) abdomen.

Download English Version:

<https://daneshyari.com/en/article/5733303>

Download Persian Version:

<https://daneshyari.com/article/5733303>

[Daneshyari.com](https://daneshyari.com)